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Connecticut Medicine

The Journal of the Connecticut State Medical Society

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Special Issue: Breast Cancer

Andrea L. M. Silber, M.D. and Scott H. Kurtzman, M.D., Guest Editors

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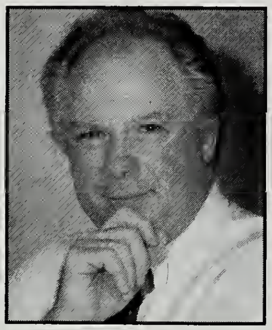

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New Horizons in the Fight Against Breast Cancer

ANDREA L. M. SILBER, M.D.

MEDICAL oncologists have witnessed the introduction of pharmacological modalities for breast cancer that are not cytotoxic chemotherapy. In this special issue of *Connecticut Medicine,* it is worthwhile to note some of these promising areas that may enhance quality of life by treating disease with minimal toxicity or by diminishing known side effects of toxic chemotherapy.

One such area is the use of biphosphonates that have been shown to reduce both osseous and nonosseous metastases in breast cancer. These compounds inhibit the function of osteoclasts and their antitumor effect, may be due to promotion of apoptosis in tumor cells. The drugs can be given orally, have minimal side effects and represent a novel way to treat visceral disease and prevent bone metastases. It remains to be seen which of the several available biphosphonates have this antitumor effect, but no doubt these drugs will be used in the future to treat breast cancer.

The HER2/ neu gene encodes a protein that is a type of growth factor receptor. Amplification of this gene is seen in 30% of breast cancers and is associated with other adverse prognostic features. Recently a monoclonal antibody directed against HER2/ neu (Herceptin) was studied in women with metastatic breast cancer and produced durable tumor responses with a favorable toxicity profile. Since the symposium at the American Society of Clinical Oncology meetings presented on 17 May 1998, there has been a recent consensus that has recommended approval of Herceptin by the FDA which could come as early as October. Those affected by breast cancer are excited by the prospect of efficacy with reduced toxicity in tumors often refractory to chemotherapy and thus clamor for its approval.

In addition to new drugs with new mechanisms, we also see new uses for old drugs. Tamoxifen is now a prototype for a new class of drugs known as selective estrogen receptor modulators # (SERMS). These drugs may exhibit estrogen or anti-estrogenic properties in different organs or on genes. Raloxifen is a newer SERM that increases bone density and reduces cholesterol while avoiding endometrial proliferation associated with Tamoxifen. There are many other SERMS in development. More important, Raloxifen seems to reduce the risk of breast cancer after a two-year trial. Upcoming is a new trial that will randomize women at high risk for breast cancer to Tamoxifen or Raloxifen. This is a natural progression from the recently publicized encouraging results of the P1 prevention trial, sponsored by the NSABP that showed a 50% reduction in breast cancer in high-risk women who took Tamoxifen. It will not be long before the perfect SERM is found that reduces breast cancer risk, increases bone density, lowers cholesterol, improves memory, and abolishes hot flashes.

Many of the advances in breast cancer care are directed toward improving quality of life in the breast cancer survivor. For example, after treatment of breast cancer, many women experience menopausal symptoms. There is still considerable debate on the use of any hormone replacement therapy in previously treated women. The reported trials are too small to make major conclusions. It is unclear whether large scale trials will be completed because of several methodologic complexities, which prompted the National Cancer Institute Division of Cancer Prevention and Control to state in 1997, the "NCI is not sponsoring Hormone Replacement Therapy symptom relief or disease prevention studies in breast cancer survivors." On the other hand, current nonhormonal management of postmenopausal symptoms remains inadequate and an area for future research.

Other quality of life issues have also entered the forefront. Pregnancy after breast cancer is important for many women and 10% to 20% of approximately 190,000 annual cases of breast cancer are women of child bearing age. Does pregnancy affect subclinical disease? What are the options to overcome iatrogenic infertility? It is known that

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ANDREA L. M. SILBER, M.D., director, Cancer Control and Prevention Unit, clinical assistant professor of medicine, Father Michael J. McGivney Center for Cancer Care, Yale University School of Medicine, New Haven.

alkylating agents are likely to cause ovarian failure and we have less information on newer agents such as the Taxames. Should fertility issues influence adjuvant therapy choices in young women with relatively good prognoses? There is now an option for *in vitro* fertilization followed by adjuvant therapy and cryopreservation of the embryos or oocyte donation after chemotherapy induced infertility. The medical oncologist will need to become comfortable with many areas that were previously unanticipated.

This issue of *Connecticut Medicine* highlights many aspects of breast cancer diagnosis and treatment.

The current decades have seen advances in all areas in addition to completely new aspects of breast cancer care. This editorial did not touch on genetic screening that can identify some individuals who have heritable breast cancer and whose treatment may be determined by genetic markers. This editorial did not discuss new nonmedical adjuncts to breast cancer care such as new data regarding salutory effects of physical activity or the role of diet in prevention. There are enough new topics to fill another issue. We can only hope that the next decade continues to offer more options, more survivors, with reduced toxicities. We still have miles to go.

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The Role of Sentinel Node Biopsy in Breast Cancer

SCOTT H. KURTZMAN, M.D.

OVER the course of the last three decades the surgical approach to the patient with invasive breast cancer has undergone a revolution. During the first half of the century, most surgeons believed that breast cancer proceeded in an orderly fashion, from ductal epithelium to regional draining lymph nodes, and then beyond to spread as systemic metastases. From this concept, it followed naturally, that if a big enough operation was done, more patients could be cured. The more modern approach has been the result of a series of clinical trials and medical observations. Based on this information, many of us now believe that breast cancers that tend to spread, do so early in their course. Thus the keys to successful treatment of breast cancer is not in how extensive an operation is done, but rather how early the cancer can be found, and how effective chemotherapy is in eradicating, or at least arresting, occult metastases.

Standard treatment of patients with breast cancer has included dissection of axillary lymph nodes. The possible reasons for doing this operation include 1) staging, 2) therapy, 3) local control, 4) treatment planning, and 5) obtaining prognostic information. In recently published articles, we have argued that the role of axillary lymph node dissection should be determined on an individual patient basis.[1] While the status of axillary nodes is a powerful predictor of outcome for breast cancer patients, in modern times it is hard to justify the operation based on the other potential benefits listed above. For example, there is clear data demonstrating the benefit of chemotherapy in premenopausal patients with invasive breast cancer, and recently published trials have also shown the same to be true for postmenopausal women. Similarly, the data on the use of radiation therapy shows that modality to be equally effective as surgical lymphadenectomy with regard to local control of axillary lymph nodes. Considering that axillary lymphadenectomy is associated with the need for overnight hospital stay (in most cases) and a definable morbidity rate, an alternative to this operation has been sought.

Dr. Donald Morton pioneered the theory of sentinel node biopsy for melanoma. His concept was that each area of the skin had a particular lymph node that was the first "station" for lymphatic drainage. If that lymph node could be identified, and carefully analyzed, it would predict whether or not the cancer was likely to have spread. The feasibility of identifying the sentinel node was demonstrated in animal models using a variety of colored dyes and radiolabelled compounds. The techniques were further developed and explored in patients with melanoma.[2] The results of clinical trials and widespread experience in patients with melanoma have clearly demonstrated that when the sentinel node is identified, it is an accurate predictor of the status of the remainder of the lymph nodes in the draining basin. Specifically, if the sentinel node is free of melanoma cells, it is highly unlikely that any other nodes will contain tumor cells. In various studies the sensitivities and specificities as well as positive predictive volume (PPV) and negative predictive volume (NPV) have been excellent.

Based on this information, the applicability to breast cancer was explored. A number of surgeons have developed this technique, but most of the credit must be given to Dr. Armando Giuliano of the John Wayne Cancer Institute. Through a series of studies and refinements, Giuliano has worked out a technique that, in his hands, is quite accurate. The technical details are available in a number of publications from his group[3] and by Krag et al.[4] Dr. Giuliano currently uses only the dye technique (isosulfan blue). Krag and others have combined the dye technique with Tc99 labeled sulfur colloid and hand held gamma probes. Regardless of the method used, in the hands of experienced surgeons the ability to accurately identify a sentinel node and the predictive value of the node is as high as in the melanoma experience.

SCOTT H. KURTZMAN, M.D., assistant professor of surgery, University of Connecticut School of Medicine, medical director, John Dempsey Hospital Breast Health Center, Farmington.

While it is clear that with experience, the sentinel node can be identified, the questions then become who are the appropriate patients to undergo this procedure, and how do we interpret the data that we obtain? These issues were recently addressed in an article by Krag et al,[5] where the results of a multicenter study are presented, as well as in the accompanying editorials.[6] Dr. Krag's study demonstrated that the sentinel node can be successfully located. However, in his study there was considerable variation in the ability of the individual surgeons to identify the sentinel nodes. In fact, the overall false negative rate in that study was 12%. For that reason, in my opinion, the standard of care in the community remains complete axillary node dissection for patients in whom the status of the nodes will determine treatment. Before a lesser procedure such as sentinel node biopsy is offered to a patient, the surgeon performing the procedure must have demonstrated through personal experience the ability to find the sentinel node. The experience of Giuliano and others is that there is a variable learning curve in mastering this technique. In Krag's study, surgeons needed to demonstrate their proficiency in five operations, for some this was inadequate. Simply attending a course with animal models or watching an experienced surgeon perform the procedure does not suffice. The development of these skills may take 10, 25, or 50 cases in which the surgeon identifies a sentinel node and then completes the dissection. Histologic examination should show that in that surgeons hands, in that institution, the sentinel node is the only node containing tumor cells in more than 90% of cases where there are positive nodes, and the sentinel node should be identified in the vast majority of cases.

Considerable debate remains as to how extensively the sentinel node should be evaluated. It is clear that sophisticated techniques can identify tumor cells or other tumor associated products. There are a number of published articles documenting that polymerase chain reaction[7] and immunohistochemical techniques can identify tumor cells in nodes that were called negative by standard H & E methods. There is however considerable debate and discussion regarding the implications of such a finding. Does the presence of micrometastases in a lymph node have the same meaning as "macrometastases"? Should such a discovery obligate a complete axillary dissection rather than radiation or observation of the axilla? These questions must be considered in selecting from various treatment options for patients. Similarly, if the number of positive nodes will make a difference in the choice of therapy, then patients with a positive sentinel node should have a complete axillary node dissection. On the other hand, if the decision to treat or not treat is made on other grounds such as tumor size or medical conditions that are not conducive to chemotherapy, then perhaps no node dissection need be done.

Thus, although several trials have demonstrated the feasibility of sentinel node dissection, the choice of appropriate patients and interpretation of the data obtained remains to be clearly defined. While there is great patient acceptance for this highly publicized technique, good clinical judgement should supercede enthusiasm for this exciting new approach.

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Epidemiology of Breast Cancer in Connecticut Women

ANTHONY P. POLEDNAK, Ph.D.

ABSTRACT—At least 50% of breast cancer may be "explained" by known or suspected risk factors, including modifiable behaviors involving diet, overweight, exercise, and alcohol use. Interest continues to grow in "hereditary" breast (and ovarian) cancer due to germ cell mutations, but most breast cancers are due to environmentally induced (somatic) mutations. According to data from the Connecticut Tumor Registry, the incidence of invasive breast cancer has changed little since 1990. The proportion of breast cancers diagnosed at the *in situ* stage has increased while the proportions diagnosed at the regional and distant stages have decreased, which is consistent with an effect of increased screening. Breast cancer mortality rates, the crucial yardstick of progress in cancer control, have declined slightly in Connecticut (and nationally) since 1989, reflecting the effects of earlier detection (through screening) and improved treatment. Primary care physicians have an important role in primary and secondary prevention.

THE American Cancer Society has estimated that about 180,200 new cases of invasive breast cancer was diagnosed in U.S. women in 1997,[1] based on incidence rates from the National Cancer Institute's Surveillance, Epidemiology and End Results (SEER) Program,[2] which includes the Connecticut Tumor Registry (CTR). SEER registries have high standards for completeness and accuracy of data.[3,4] An estimated 44,190 women died from breast cancer in the U.S. in 1997.[1] An estimated 1,400 new invasive cancers were be diagnosed among U.S. males in 1997,[1] with an estimated 290 deaths, and male breast cancer has been studied epidemiologically.[5] However, this review is limited to breast cancer in females and to primary and secondary (*vs* tertiary) prevention issues.

Breast Cancer Risk Factors

A previous diagnosis of breast cancer is a risk factor for an independent primary cancer in the contralateral breast; bilateral cancer occurs in about 5% to 15% of women with breast cancer.[6,7] While the rate of positive findings is regarded as too low (ie, about 2%) to justify blind biopsy of the contralateral breast at the time that breast cancer is diagnosed in one breast, bilateral mammography and clinical breast examination are needed because mammographically and clinically directed biopsy of the opposite breast often yields synchronous and asynchronous contralateral tumors or preinvasive lesions.[7] Also, breast cancer patients should be carefully monitored clinically due to elevated risks for second cancers at certain sites other than the breast (eg, melanoma, corpus uteri, ovary, and thyroid).[6,8]

Certain types of benign breast disease (especially atypical hyperplasia and fibroadenoma with hyperplasia) are associated with elevated risk of invasive breast cancer.[9]

ANTHONY P. POLEDNAK, PH.D., Epidemiologist, Connecticut Tumor Registry, Department of Public Health. This work was supported in part by Contract N01-CN-67005 between the National Cancer Institute and the Connecticut Department of Public Health.

Untreated, biopsy-proven lobular carcinoma *in situ*, which is mammographically occult, is associated with a risk of invasive ipsilateral breast cancer of about 1% per year and carcinoma also can occur in the contralateral breast.[10] This risk appears to be lower than that for ductal carcinoma *in situ* (DCIS) untreated (beyond biopsy) but not for DCIS after lumpectomy or mastectomy; prognostic implications are uncertain, but the majority of DCIS may never progress to invasive cancer.[11]

Family history and genetics.—The lifetime risk of being diagnosed with invasive breast cancer is about one in eight for women, but is about two to three times greater for women with a history of breast cancer in a first-degree relative (mother, sister, or daughter) than in women with no family history of breast (or ovarian) cancer. For clinicians, guidelines have been published for dealing with patients having a strong family history of breast and/or ovarian cancer.[12] An unresolved issue is the degree of reduction in risk that results from "prophylactic" removal of the breast (mastectomy) among women without cancer who have an inherited germ-line mutation in a known breast cancer gene.[13]

About 9% of breast cancers may be "attributed" to family history of breast cancer,[14] but not all of these cancers are "hereditary" (ie, associated with germ-cell mutations). The identified tumor suppressor genes called BRCA1 (associated with both breast and ovarian cancer) and BRCA2 (limited to breast cancer) do not account for the majority of cases of hereditary breast cancer, especially in families with only breast (*vs* breast and ovarian) cancer,[15] so that other (unidentified) genes must be involved. About 90% of breast cancers must be due to environmentally induced somatic mutations, perhaps largely involving changes in proliferation of cells in the breast due to hormonal factors.[16]

Sociodemographic and reproductive-hormonal factors.—A statistical risk factor is higher socioeconomic status (SES),[17] with an estimated 19% of breast cancers "explained" by higher income level.[15] However, SES reflects factors more directly related to breast cancer risk, such as reproductive-hormonal characteristics, which have been the main focus of epidemiologic studies. Earlier age at first pregnancy and larger number of pregnancies, associated with lower SES, are also associated with reduced risk of breast cancer. The epidemiologic concept of "attributable risk" has been used to estimate the relative importance of specific risk factors. About 30% of breast cancers may be "attributable" to a negative history of full-term pregnancy and later age at first birth of a child (especially, after age 30 years),[15] reflecting the effects of hormonal factors on breast tissue. However, pregnancy may have a short-term effect of increasing breast cancer risk in younger women as well as a long-term effect of lowering the risk (at older ages).[18] The results of studies on prolonged breastfeeding, especially among premenopausal women, independent of parity (number of children), are conflicting and the U.S. Nurses' Health Study found no important association.[19]

Relatively early age at menarche and late age at menopause are risk factors, involving longer periods of exposure to endogenous estrogens. Breast cancer risk in postmenopausal women appears to be associated with relatively high blood concentrations of endogenous estradiol.[20] Breast cancer risk increases with age, which is a nonmodifiable risk factor, but the rate of increase is not uniform. In SEER data, and in Connecticut (Fig. 1), invasive breast cancer first appears clinically at age 20 to 24 years. From age 45 to 59, or around the time of menopause, the rate of increase slows (Fig. 1), reflecting the effect of hormonal factors (estrogen levels).

With regard to exogenous estrogens, there may be a small excess risk of breast cancer in the first 10 years after use of oral contraceptives is discontinued.[21] The large prospective (cohort) study of nurses found no evidence for significant increased risk for long-term past use (overall or prior to a first full-term pregnancy) in women over 40 years old (ie, the age when rates of breast cancer begin to rise substantially; Fig. 1), although the possibility of a small increase in risk could not be ruled out.[22]

After menopause, taking "replacement" estrogens may be associated with a slightly increased risk of breast cancer, and possibly highest risk among women with a family history of breast cancer.[23] The addition of progestins to estrogen therapy does not appear to reduce this excess risk of breast cancer among postmenopausal women.[24] Sensitivity and specificity of screening by mammography are reduced among women currently undergoing hormone replacement therapy (HRT), due to increased mammographic density; there is a suggestion that short-term cessation of HRT may be useful.[25,26] In the decision about use of estrogen or HRT, the apparent benefits for heart disease and osteoporosis must be weighed against potential risks involving breast and uterine cancer.[27]

Body size, diet, and exercise.—Excess body weight ("overweight" and "obesity," as defined by the ratio of weight to height) is a risk factor for diagnosis of breast cancer after menopause. This reflects the importance of hormonal factors (ie, conversion of precursors to estrogens in peripheral body fat tissue).[28] In a recent Behavioral Risk Factor Surveillance System (BRFSS) survey, almost 20% of Connecticut women were overweight, on the basis of weight/height ratio (Table 1). Larger body height as a risk factor for postmenopausal breast cancer may reflect the effects of diet in early life, but this requires further study.[29] The specific dietary regimen that is most protective has yet to be delineated. However, the American

Institute for Cancer Research and its European counterpart (the World Cancer Research Fund) have issued 14 dietary guideliness, most of which are similar to those of the American Cancer Society.[30] Included were recommendations for increasing vegetable and fruit consumption and limiting red meat and fatty foods, along with controlling weight, increasing physical activity, and abstaining from tobacco and alcohol (or limiting intake to "less than two drinks a day and one for women").[30] Although NCI recommends at least five servings of fruits and/or vegetables per day, the majority of Connecticut women have not achieved this level of daily intake (Table 1).

Most (though not all) case-control and cohort studies of breast cancer have shown an association between physical inactivity and risk of breast cancer,[31] although evidence for causality may be insufficient due to potential confounding and in the absence of clinical trials.[32] About 25% of Connecticut women do not exercise at all (Table 1).

Alcohol and tobacco.—Consumption of at least two or three drinks per day may be associated with a small increase in breast cancer risk, possibly involving an effect of alcohol on blood estrogen levels.[33,34] The proportion of breast cancers "explained" by use of alcohol in a given population depends on the proportion of women having at least two to three drinks per day. In a recent Connecticut

Table 1.—Prevalence (%) of Selected Modifiable Cancer Risk Factors in Connecticut Women (Age 18 Years and Older), from Behavioral Risk Factor Surveillance System (BRFSS) Surveys[63,64]

Risk Factor	**Prevalence among women in 1994**
Overweight[†]	19%
Fruits/vegetables 5+/day	39%
Alcohol,[§] acute	9%
Alcohol, chronic	2%
Exercise, none	26%
Exercise, regular[¶]	24%
Current smoking	19%

[†] Defined by a ratio of weight (in kilograms) to height (in meters squared) of at least 27.3.[64]

[§] From a 1990 survey (questions on alcohol use are not asked each year). "Acute" is 5 or more drinks on one or more occasions in the last month and "chronic" is 60 or more drinks per month.[63]

[¶] Regular exercise is 5 times/week for 30 minutes each time.[64]

Not established as a risk factor for breast cancer, but may be related to prognosis.

Note: Data from BRFSS surveys in more recent years are now available, but changes in the estimated prevalences of the risk factors shown in this table have been small.

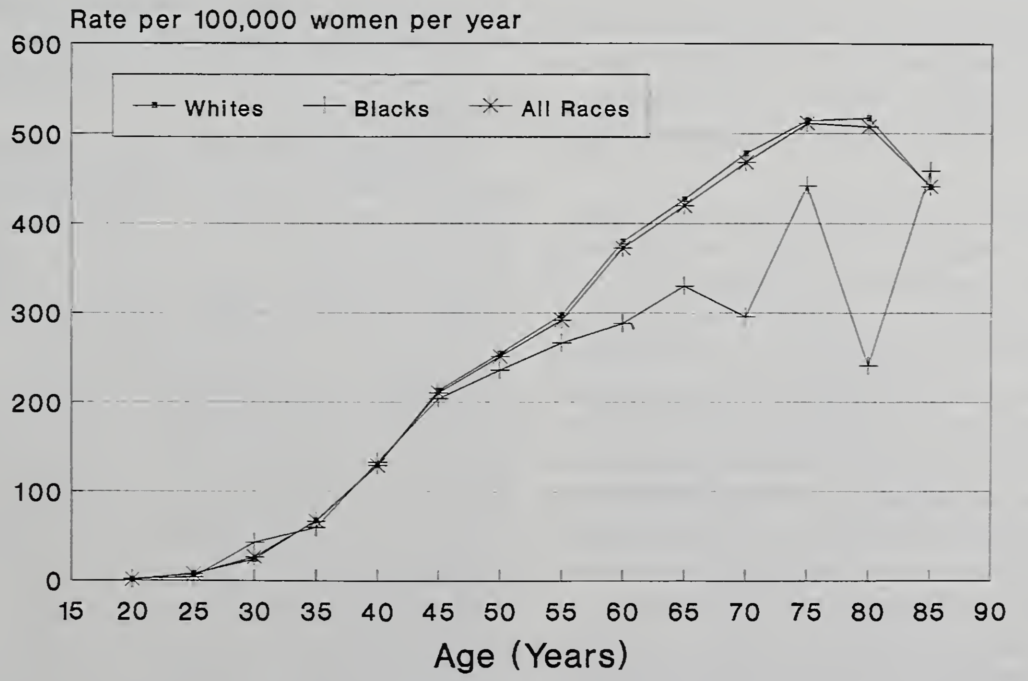

Figure 1.—Average annual age-specific incidence rates per 100,000 for invasive breast cancer in Connecticut women in 1990-94.

BRFSS survey (Table 1), only about 2% of women had 60 or more drinks in the past month. Smoking may increase the risk of breast cancer in women with certain genetically controlled characteristics, involving the metabolism of mutagens (aromatic amines) derived from cigarette smoke, but this requires confirmation.[35,36] Smoking has been associated with poorer prognosis of breast cancer.[37]

Primary care physicians can play a role in helping some patients to reduce their use of alcohol and tobacco, even with short counseling sessions,[38] as well as in affecting other behaviors relevant to cancer risk.

Various environmental factors.—Exposure to ionizing radiation during childhood is a risk factor for breast cancer, especially among younger adults, at least for high radiation doses (as involved in Japanese atomic-bomb survivors).[39] The contribution of exposure to ionizing radiation from all sources (such as medical radiography) to breast cancer in the U.S. is probably very small (perhaps 2%).[15] Results of epidemiologic studies have not supported an association between cancer risk and exposure to electromagnetic fields (EMFs) (a form of nonionizing radiation) from power lines (extremely low frequency EMFs).[40] Evidence for a link between cancer and radio frequency radiation, or higher frequency EMFs, is also scanty.[41] Among Norwegian female radio and telegraph operators, an elevated risk of breast cancer and an association with shift work were found; if confirmed, this could suggest an effect of EMF and/or nocturnal exposure to light, through a mechanism involving chronobiological disturbances and melatonin production by the pineal gland.[42]

Results of studies of estrogen-related cancers in relation to exposure to organochlorines (such as DDT and contaminants of pesticides) have been inconsistent; estrogenic activity may be too weak to affect the risk of breast cancer.[43]

Region of the U.S.—In 1988–92, the average annual incidence rate (age-adjusted by the direct method, using the 1970 total U.S. population as the standard) for female invasive breast cancer was 115.6 for Connecticut (*vs* 109.6 for all nine SEER registries), with similar rates for Seattle-Puget Sound (115.3) and San Francisco-Oakland (114.6).[2] The lower rates in New Mexico (91.9) and Utah (93.8)[2] are related to the ethnic and religious backgrounds of the populations, including large numbers of Hispanics and American Indians (Native Americans) in New Mexico and Mormons in Utah, reflecting differences in the distribution lifestyle factors (eg, reproductive histories).

An apparent cluster of high death rates from breast cancer in the Northeast was unexplained by various risk factors for which data were available on a regional level. The cluster included the Long Island-NJ-Philadelphia area, but not Connecticut.[44] An often-cited high mortality rate in Tolland County (CT) was found to have been a transient occurrence.[44] The Nurses' Health Study provided an opportunity to examine breast cancer incidence by geographic area of the U.S., after adjusting for age and established risk factors (as recorded for each woman); no excess incidence was found for postmenopausal breast cancer in the Northeast.[45] In conclusion, studies to date have shown little evidence for regional differences that are unexplained by known risk factors; hence, large regional differences in the prevalence of environmental exposures to breast carcinogens appear unlikely.

Prospects for primary prevention.—Major known risk factors involve certain reproductive factors, which most women are unlikely to modify for the sole purpose of changing their risk of breast cancer. Relatively small increases in risks have been involved in most epidemiologic studies examining modifiable risk factors, and potential confounding by other factors is difficult to rule out. The Women's Health Initiative is a prospective dietary intervention trial of the role of a low-fat diet (ie, 15% of calories from fat) in preventing breast cancer, addressing the hypothesis that dietary fat is causally related to postmenopausal breast cancer.[46] This trial also will assess the role of estrogen and estrogen-progestogen replacement therapy in the risk of breast (and colon) cancer.[27] The Breast Cancer Prevention Trial is enrolling 13,000 women at increased risk for breast cancer to determine if tamoxifen can prevent the disease, along with heart disease and osteoporosis;[47] results may be available in four to five years. The results of these two trials may be useful in planning public health interventions aimed at primary prevention of breast cancer. The side-effects of tamoxifen (eg, elevated uterine cancer risk, liver toxicities) is a complicating factor.

About half of U.S. breast cancer cases may be attributable to known risk factors including later age at first birth, nulliparity, family history of breast cancer, and higher SES; addition of later menopause, adult weight gain, and alcohol use could increase this estimate.[15] The additional effects of physical inactivity and dietary factors are uncertain. About half of coronary heart disease (CHD) is also explained by known risk factors, and some factors overlap with those for breast cancer (eg, obesity and physical inactivity).[48] However, in contrast to breast cancer, estrogen deficiency is a risk factor for CHD in postmenopausal women, and this enters into the decision-making process regarding hormone replacement therapy. In the Breast Cancer Prevention Trial, tamoxifen (while an "anti-estrogen") may prove to have some of the beneficial effects of estrogen replacement therapy on CHD risk. However, other (ie, nonuterotrophic) estrogen response modifiers also require investigation.

Breast Cancer Data for Connecticut Women

The Connecticut Tumor Registry (CTR) receives reports from all hospitals and pathology labs in Connecticut (by state regulation) and has reciprocal agreements with registries in surrounding states. Included were International Classification of Diseases for Oncology (ICD-O) version 2 codes C50.0-50.9 and behavior codes 2 (*in situ*) and 3 (invasive). CTR (and SEER) data refer to cancers not women with cancer; bilateral cancers or cancers of different histology in the same breast are coded as independent primaries. Excluded were lymphomas of the breast and cancers ascertained by death certificate only (<1.5% of all cancers) or autopsy only. At the time that most analyses were conducted, CTR data were complete for cancers diagnosed as late as 1994; data for 1995 and 1996 are now complete.

Incidence rates by age, race-ethnicity, and time period and place within Connecticut.—For *in situ* breast cancer, incidence rates increased during the 1980s in Connecticut, reflecting the impact of increased rates of breast cancer screening.[12] Numbers of incident (ie, newly diagnosed) *in situ* cancers in the CTR were about 300 in 1988–89, and varied from 335 to 389 per year in 1990–94, with 453 diagnosed in 1995. Ductal carcinoma *in situ* (DCIS) comprises the majority of *in situ* cancers (about 56% in Connecticut in 1990–94).

For invasive breast cancer in Connecticut women, increases in the average annual age-standardized incidence rate (per 100,000 per year) since the 1940s are probably at least in part real, and not due only to better diagnosis, because similar trends have been noted in Rochester, Minnesota where high quality medical care and case-finding have existed for many decades.[50,51] A sharp increase occurred between 1980–84 and 1985–89, reflecting a rapid increase in breast cancer screening by mammography, which led to earlier detection of cancers. Numbers of incident invasive breast cancers have remained rather constant since 1989 (ie, about 2,400 to 2,577 per year).

Average annual incidence rates (1990–94) roughly doubled every five years of age (Fig. 1) from 30 to 34 years (193 cancers, 26 per 100,000 per year), 35 to 39 (465 cancers, 66 per 100,000), 40 to 44 years (823 cancers, 129 per 100,000) and 45 to 49 (1,145 cancers, 211 per 100,000). The rate of increase with age slowed from 45–49 to 55–59, or around the menopause, and then increased with age until 75–79 years (514 per 100,000 per year). Incidence rates were slightly higher in blacks than whites up to about the age of 40–44 years, but higher in whites at older ages (Fig. 1), as in SEER data.[2] While reporting of information on Hispanic ethnicity to the CTR is incomplete, the age-standardized incidence rate is lower for women classified as Hispanic (on the basis of reports from hospitals and/or matching with a list of Spanish surnames) than for all white women in Connecticut,[49] probably reflecting ethnic differences in socioeconomic status (SES) and reproductive characteristics (eg, age at first pregnancy and total number of pregnancies). Other racial-ethnic groups (various "Asian" groups and American Indians) are also of interest, but numbers of invasive breast cancers in the CTR were small (ie, less than 10 per year in 1990–94).

Ratios of observed numbers of invasive breast cancers to numbers expected on the basis of statewide age-specific incidence rates, or standardized incidence ratios (SIRs), have been reported by county and town in Connecticut for 1989–91.[52] For 1990–94, Fairfield county (which includes some affluent areas) had the highest SIR (3,395 cancers *vs* 3,211 expected, SIR = 1.06) and Windham county (with the lowest SES) the lowest (311/365 or 0.85). The towns with highest SIRs included Easton (37 cancers *vs* 25.1 expected, SIR = 1.47), Weston (43 cancers *vs* 30.3 expected, SIR =1.42), and Westport (150 cancers observed *vs* 106.1 expected, SIR = 1.41). SIRs predicted from SES data by town (from the 1990 Census), however, were also >1.00 for these affluent towns. Therefore, living in these towns probably does not in itself constitute a risk factor for breast cancer. However, even if some high SIRs by town can be explained by SES, primary prevention programs could target such towns.

Histology and hormone receptors.—Reporting of "not otherwise specified" (NOS) histologic types of invasive breast (including adenocarcinoma NOS) in SEER has declined sharply over time; the use of NOS may reflect the availability of only a limited tissue sample for examination.[53] Histologic types differ somewhat in location in the breast, age and stage at diagnosis, and five-year relative survival rate.[53] In the CTR (as in SEER), infiltrating duct carcinoma is the most common histologic type of invasive cancer, comprising 74.9% of all 12,709 invasive breast cancers diagnosed in 1990–94 (Table 2).

Invasive lobular carcinoma, the second most common type (7.1%; Table 2), is often regarded as "insidious" but bilaterality and recurrence rates may not differ[54] and five-year relative survival was better in SEER data, in comparison to invasive ductal carcinoma.[53] Medullary carcinoma (1.1% of cancers; Table 2) is more common among blacks (3.1%) than whites (1.1%) and among younger women, and tends to be associated with earlier stage at diagnosis and with relatively fewer recurrences many years after diagnosis.[53] Both duct and lobular carcinoma can occur within a single tumor mass (3.2% of cancers; Table 2), and this may be associated with a lower frequency of distant metastases at diagnosis (and thus with a higher overall survival).[53] Mucinous (mucin-producing or colloid) adenocarcinoma (2.1% of cancers; Table 2) is associated with earlier stage at diagnosis and high survival rates

Table 2.—Histology and Steroid Hormone Receptors in Invasive Breast Cancers Diagnosed in Connecticut Women

Characteristic	No.	%
Histology (1990–94) (N=12,709)		
Carcinoma, NOS	389	3.1
Adenocarcinoma, NOS	301	2.4
Infiltrating ductal	9519	74.9
Lobular	901	7.1
Better prognosis:		
Comedocarcinoma	313	2.5
Mucinous	266	2.1
Tubular	113	0.9
Medullary	151	1.1
Papillary	54	0.3
Worse prognosis:		
Inflammatory	81	0.6
Age <50 years (N=2,481)	(29)	(1.1)
Steroid hormone receptor proteins (1992-94 only) (N= 7,611)		
Estrogen receptor positive	4,211	55.3

NOS: Not otherwise specified.
ER: Estrogen receptor protein
Note: Data for more recent years of diagnosis are now available from the Connecticut Tumor Registry.

(even within stage at diagnosis).[53] Histologic types generally recognized as having better prognosis (relative to invasive ductal carcinoma) comprise only a small proportion of invasive cancers,[55] but inclusion of lobular and comedocarcinoma would increase this proportion somewhat (Table 2).

Inflammatory carcinoma has a low five-year relative survival rate, reflecting later stage at diagnosis;[53] it comprised 0.6% of cancers (1.1% at age <50 years) in the CTR for 1990–94.

Estrogen receptor (ER) positive cancers, generally defined as 10 fmol/mg or more of cytosol protein, increase in proportion with age and are associated with better prognosis (due in part to response to hormone therapy) than ER-negative tumors.[55] Estrogen receptor status appears to be a less important prognostic indicator than number of positive nodes, and progesterone receptor status appears to offer no additional important prognostic information.[55] About 50% to 85% of breast cancers contain a measurable amount of ER, and 55% of invasive breast cancers diagnosed in Connecticut in 1992–94 were reported as ER-positive (Table 2). Estrogen receptor status was added to the SEER Program database (as a "tumor marker") for diagnoses starting in 1990, but data were largely incomplete until 1992.

Stage at diagnosis.—Axillary lymph-node status is the most important prognostic factor for invasive breast cancer in all major studies,[55] and SEER extent of disease coding includes number of nodes examined and number positive. SEER[2] and the CTR published data by "summary stage." The Connecticut Tumor Registry stages are *in situ*; local (localized), or confined entirely to the breast; regional, or extension beyond the breast to surrounding organs or tissues and/or into ipsilatera axillar nodes; and distant (metastatic), or spread to parts of the body distant or remote from the breast, either by direct extension of the tumor or by discontinuous metastasis. The proportion of cancers diagnosed at the *in situ s*tage has increased, while regional and distant stage have declined, in Connecticut since 1989 (Fig. 2), consistent with an effect of increased rates of breast cancer screening. However, due to uncertainties in the clinical significance of *in situ* breast cancer detected by screening,[12] trends in invasive cancer (stage-specific incidence rates and mortality rates) provide a better yardstick of progress.

The well-known black-white difference in stage at diagnosis of breast cancer has persisted, with a lower proportion of local stage and higher proportion of regional stage in blacks than in whites in 1990–94 in Connecticut (Fig. 3). However, in Connecticut, the stage distribution improved more markedly for black than white breast cancers from 1990 to 1995.

A Connecticut study suggested that the higher prevalence of obesity in black *vs* white breast cancer patients may explain part of the racial difference in stage at diagnosis,[56] while racial differences in history of breast cancer screening are less important.[57] In a California study, however, black women experienced a longer delay (even after controlling for the racial difference in income) between an abnormal screening test and a diagnostic test.[58]

Stage at diagnosis is clearly related to age at diagnosis as shown for breast cancers diagnosed in 1990–94 in Connecticut (Fig. 4), with higher proportions of regional and distant stages at younger ages (especially <40 years), reflecting variation in such factors as tumor growth rates and screening rates. Younger age at diagnosis has been associated with biologically more aggressive breast cancer (eg, higher histologic grade), although treatment decisions based solely on age may be unwarranted.[59] The higher proportion of distant-stage cancers in elderly women (especially age 80 and older) is consistent with lower screening rates. Screening for breast cancer by mammography and clinical breast examination has been widely recommended for women 50 years of age and older, due to about a one-third reduction in breast cancer mortality (estimated from randomized trials). The issue of mammographic screening recommendations for women 40 to 49 years old has been controversial, as witnessed by the

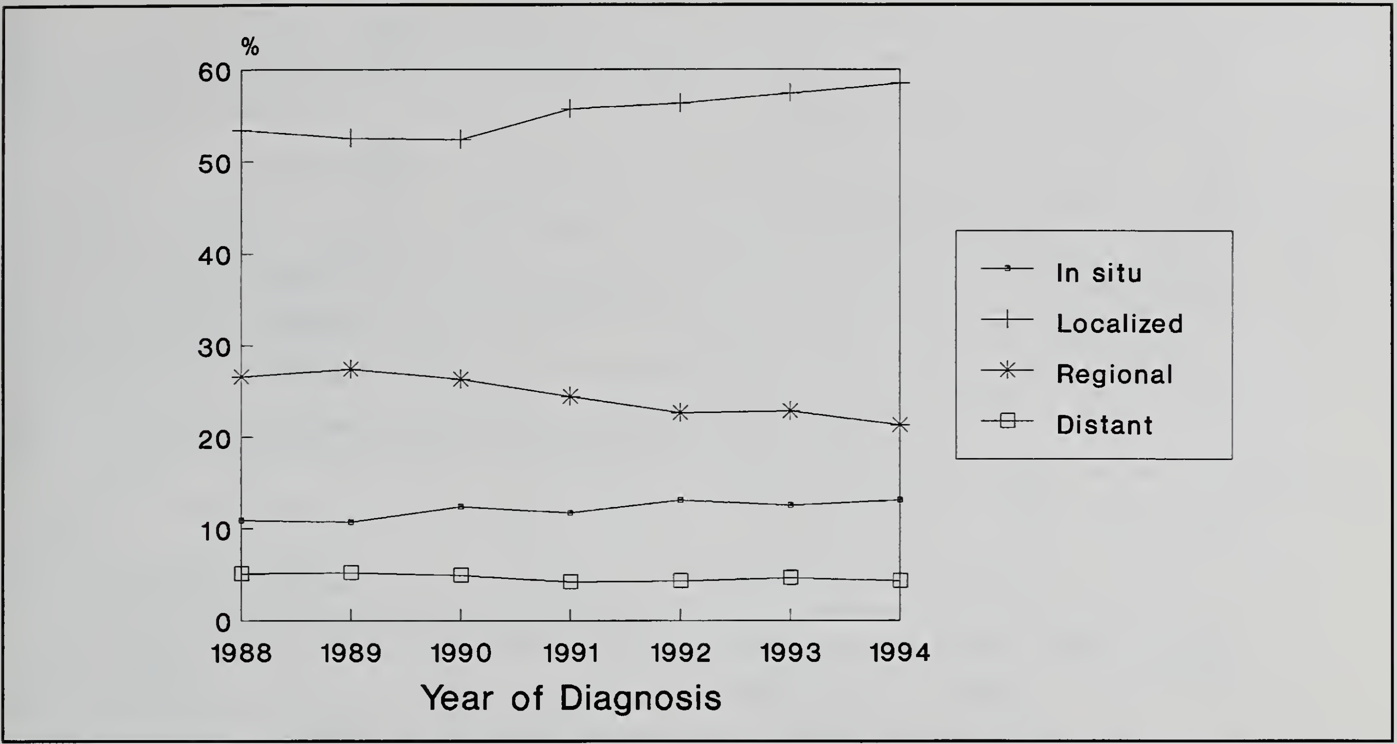

Figure 2.—Proportion of breast cancers diagnosed at each Connecticut Tumor Registry stage (1988 to 1994); unknown stage cancer are not shown.

response to the NIH Consensus Conference on Breast Cancer Screening (held in January 1997), due in part to the lower estimated benefit.[60] The American Cancer Society and (now) NCI recommend screening by mammography every one to two years for women 40 to 49 years old.[61] Surveys show that women 40 to 50 years old tend to greatly overestimate both their risk of dying from breast cancer and the effectiveness of screening in reducing mortality,[62] emphasizing the need for public education by physicians and others.

While the proportion of Connecticut women aged 50 years and older who reported having had a mammogram and clinical breast examination in the past two years has slightly exceeded the year 2000 objective of 60%,[63,64] many women still do not get regular (annual or biennial) breast cancer screening examinations and there are social-class inequities in access to screening. Along with socioeconomic factors, having a regular physician, physician specialty (gynecologist or internist), and physician recommendation have been shown to be positively related to breast cancer screening (and repeat screening) among women.[65] However, new approaches that encourage participation in screening programs, after computerized reminders are sent to women, are needed to increase screening participation among those who have never been screened or are infrequently screened.[66]

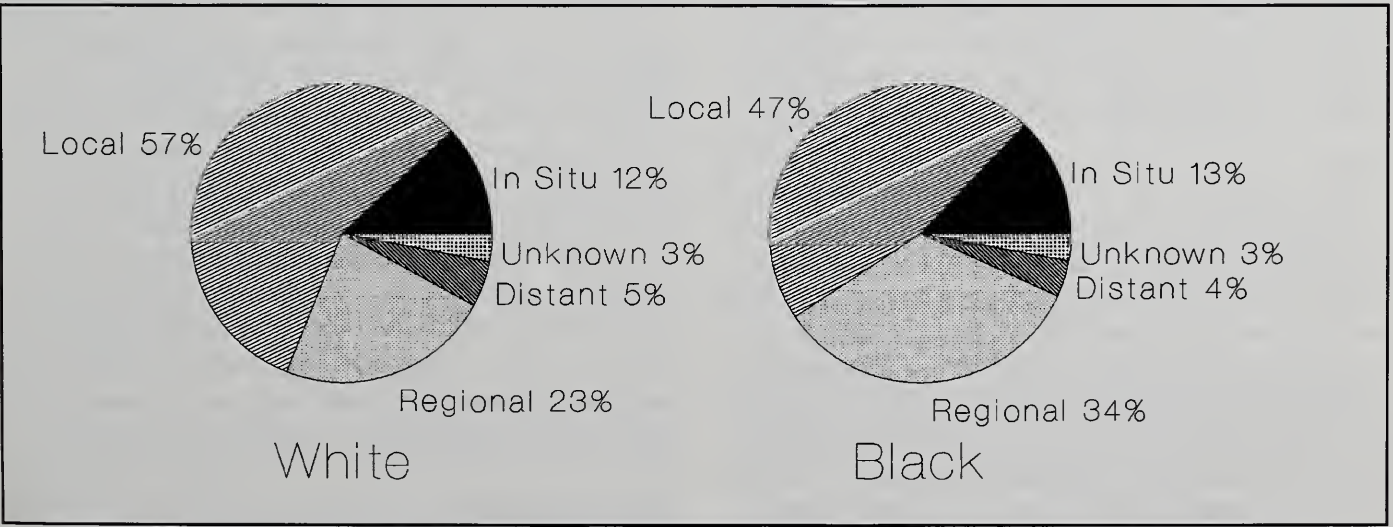

Figure 3.—Proportion of breast cancers diagnosed at each Connecticut Tumor Registry stage in 1990-94, for blacks and whites.

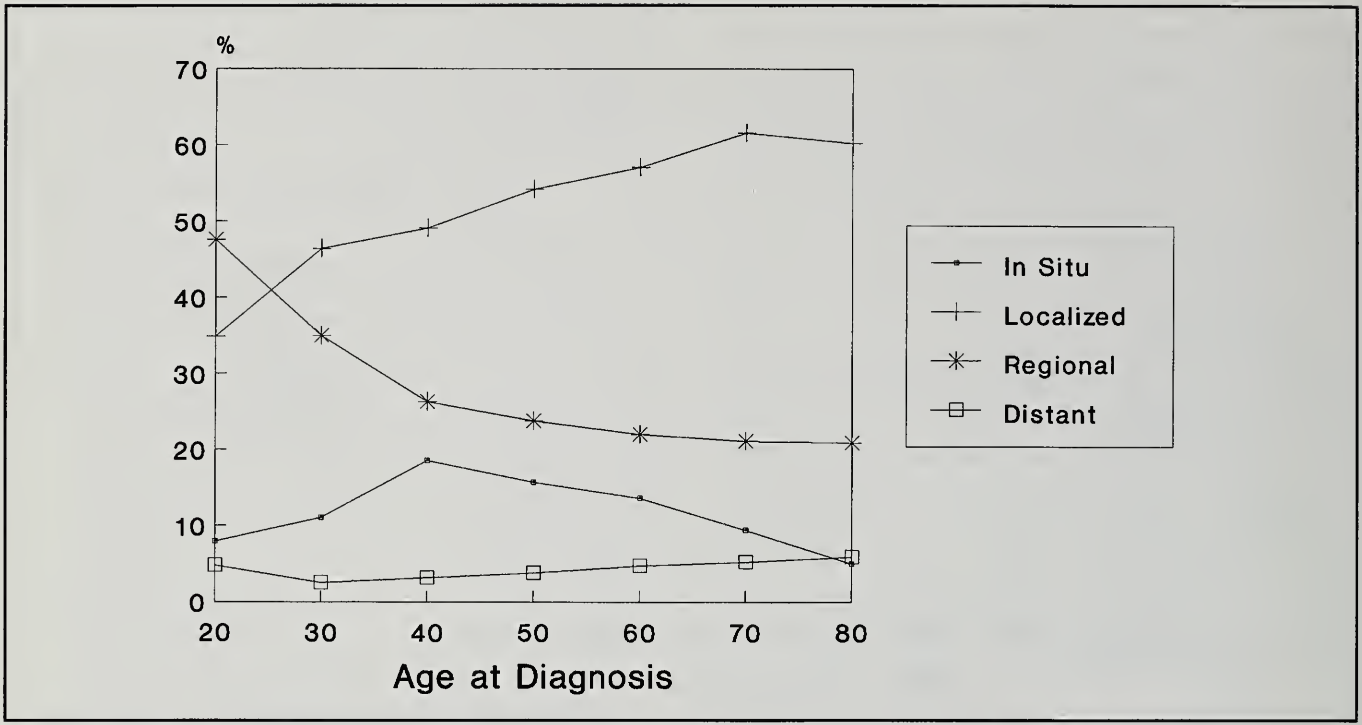

Figure 4.—Proportion of breast cancers diagnosed at *in situ*. local, regional, and distant stage by age at diagnosis in 1990-94; unknown stage cancers are not shown.
Note: Incidence data for more recent years of diagnosis are now available from the Connecticut Tumor Registry.

Cancer registries are useful in monitoring the impact of screening programs on stage-specific incidence rates, as an interim measure of program success (in lieu of long-term data on breast cancer mortality).[66] CTR surveillance has shown geographic variation in proportion of late-stage cancers among census tracts in the largest towns,[67,68] which should be useful in planning and evaluation interventions aimed at earlier detection of breast cancer through screening. For quality control of mammography, data from cancer registries and radiologic practices have been linked;[69] one radiology group in Connecticut linked mammography findings with CTR data for several years. Breast cancers diagnosed within one to two years after a "negative" mammography report can be identified for review of mammograms in order to identify false negatives.

Survival and mortality rates.—Relative survival refers to the proportion of persons diagnosed with cancers who have survived after a given number of years, taking into account death rates in the general population. The five-year relative survival rate for invasive breast cancer in women diagnosed in 1986–93 was 84.5% for Connecticut, or similar to the 84.2% figure for all nine SEER registries.[2] In the SEER Program, for cancers diagnosed in 1986–93, five-year relative survival rates were 96.8% for localized, 75.9% for regional, and 20.6% for distant stage.[2] In average annual age-adjusted mortality rate for invasive breast cancer in 1990–94, Connecticut (25.9 per 100,000) ranked 18th from the top and differed little from the rate for the entire U.S. (26.4 per 100,000 per year).[2]

Trends in mortality rates from breast cancer are influenced by trends in incidence rates, survival rates (strongly affected by stage at diagnosis) and treatment. The age-adjusted mortality rate from female invasive breast cancer in the U.S. declined by 6.3% from 1991 to 1995, presumably reflecting advances in both early detection and in treatment.[70] In Connecticut, the age-adjusted death rate (using the 1970 U.S. standard population for adjustment) was 28.5 per 100,000 per year for 1979–81, declining slightly to 27.5 for 1989–91 and 26.2 for 1995 (625 deaths).[71] Breast cancer, however, remains a leading cause of death in Connecticut women 35 to 44 and 45 to 54 years old; among cancers, it is surpassed only by lung cancer at ages 55 to 64, 65 to 74, and 75 to 84 years.[71]

Trends in the prevalence of living persons ever diagnosed with breast cancer depend on trends in survival and incidence rates, as well as in the age structure of the population (because breast cancer incidence rates vary with age; Fig. 1). CTR data were used to estimate the prevalence of women in Connecticut ever diagnosed with breast cancer (about 24,000) known to be alive as of a recent year (ie, 1994), prevalence in the entire U.S. in 1994, and predicted future prevalence in the U.S.[72] With the "aging" of the population, projections of incidence and prevalence support the need for expanding primary prevention research as well as studies of the quality of life of breast cancer survivors.[72]

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A Comprehensive Breast and Cervical Cancer Screening Program for Medically Underserved Women in Connecticut

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ABSTRACT—A comprehensive breast and cervical cancer early detection program supported by federal and state funds and administered by the Connecticut Department of Public Health, is actively recruiting and screening older, uninsured, low income women at contracted health-care facilities throughout the state. The program provides diagnostic testing, treatment referral, outreach, and educational activities. During the first 27 months of the program, 5,509 women were enrolled and screened. Women were recruited primarily through media sources and physician/nurse referrals. The majority of women served were non-Hispanic white, between ages 40 to 59, with annual incomes of less than $10,000, and a high school education or less. Some 62% of enrolled women either never had a mammogram or did not have a repeat mammogram within the time-frames recommended by ACS. Recruitment efforts continue to enroll medically underserved women for breast and cervical cancer screening services. Future efforts will focus on rescreening in order to achieve the program's overall mission of detecting breast and cervical cancers at earlier stages.

In March 1995, the State of Connecticut Department of Public Health was awarded a four and one-half year cooperative agreement by the Centers for Disease Control and Prevention (CDC) to establish the Connecticut Breast and Cervical Cancer Early Detection Program (CBCCEDP). The program was created with one mission, to reduce breast and cervical cancer morbidity and mortality by diagnosing breast and cervical cancers at earlier, more treatable stages. The CBCCEDP began screening women for breast and cervical cancer in October 1995. Additional funds were awarded to the program from the Governor's budget on 1 July 1996.

The federal cooperative agreement is part of the CDC National Breast and Cervical Cancer Program which currently funds all 50 states, five territories, the District of Columbia, and 13 American Indian/Alaska Native organizations. Federal funding is the result of the enactment of The Breast and Cervical Cancer Mortality Prevention Act of 1990 that authorizes CDC to implement state-based, comprehensive programs that focus on women age 50 and older.

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The program supports breast and cervical cancer screening, diagnostic follow-up, treatment referral, case management, computerized tracking and follow-up of clients, outreach, professional education, quality assurance, and public education. Specific procedures reimbursed through this program include screening and diagnostic mammograms, breast biopsies (incisional, excisional, core, and stereotactic), ultrasounds, fine needle aspirations, Pap tests, colposcopy-directed biopsies, and surgical consultations. Office visits, which include a clinical breast examination and a pelvic examination, are also covered.

State funding was utilized to expand program services to women age 40 to 49 and to include coverage of diagnostic procedures currently not reimbursed by CDC. These funds were also used to increase recruitment into the program by supporting mass media and community outreach initiatives, as well as outreach educators at each screening site.

Clients eligible for program services include women in Connecticut who are age 40 and older and who are at or below 200% of the federal poverty level and who have no health insurance or health insurance that does not cover these services. Women age 35 to 39 with established risk factors for breast cancer, as defined by the American Cancer Society, are also eligible for mammography services. Medicaid and Medicare provide for mammograms and Pap tests, therefore, recipients of these programs do not qualify for services through the CBCCEDP.

Program design involves centralizing all administrative functions at the State Department of Public Health. Screening, diagnostic follow-up, and treatment referral services are provided by 16 contracted primary health-care facilities. Each provider site has funding for a case manager whose duties include the administration of enrollment, screening, and data collection. Additionally, the case manager serves as a liaison between the provider site and the Department of Public Health. A total of 57 smaller satellite sites (physician offices, private radiological services, etc.) are associated with a number of the provider sites. Treatment is obtainable through the program regardless of the client's ability to pay. Providers explore all options for reimbursement of treatment costs and, if necessary, coordinate a payment schedule based on client's income.

All program activities are supported by the Connecticut Breast and Cervical Cancer Prevention and Control Coalition established by the CBCCEDP. The Coalition consists of an array of experts in the area of cancer prevention and treatment. Members serve in an advisory capacity, as well as on task forces to address program development and clinical issues.

Public Education and Outreach

The goal of the public education component of the CBCCEDP is to increase the knowledge, motivation, and ability of all women to seek regular breast and cervical screening with emphasis on the target population. Four primary efforts were developed to focus on the need to increase awareness regarding the benefits of early detection and the availability of free screening services for these hard to reach women. First, appropriate educational and promotional materials were developed. These included a brochure, poster, coupons, and videos targeting African American and Hispanic women. Second, a community based initiative involving ethnically appropriate radio and newspaper spots, local cable TV programs, and a direct mail campaign was coordinated. Third, a large-scale media campaign encompassing TV and radio spots on all major stations in the state was conducted. Fourth, recruitment of outreach educators at each provider site to conduct one-on-one communication, establish linkages with community leaders, and work collaboratively with community agencies was instituted. Additional outreach efforts have been funded through small grants to community groups. The combined effect of these initiatives has led to increased awareness of the CBCCEDP within the state.

Professional Education

The overall goal of the professional education component of the CBCCEDP is to increase the knowledge and proficiency of physicians and other health-care professionals who are involved in the performance, interpretation, and referral of mammograms and Pap tests. To address this goal, a lecture series was developed with the University of Connecticut Continuing Medical Education Division. University faculty have presented lectures on topics related to breast and cervical cancer to clinicians and other health-care professionals at CBCCEDP provider sites. In addition, a collaboration was formed with the American Cancer Society to fund a coordinator for the Primary Care Physician Program, whereby offices of primary care physicians throughout the state are visited and cancer screening information and a reminder referral system are presented to the physician(s) and staff.

Quality Assurance

The quality assurance component of the CBCCEDP ensures that high quality mammograms and Pap tests are performed, results are interpreted and reported accurately, and a feedback system linking results with outcomes is established. All providers of mammographic services to CBCCEDP clients must be MQSA (Mammography Quality Standards Act) certified and must utilize the ACR (American College of Radiology) lexicon of standardized terminology for reporting results. All laboratories reading Pap tests must be Clinical Laboratory Improvement Act (CLIA) certified and must utilize the Bethesda reporting system. The case manager at each provider site coordinates client care to ensure that all necessary diagnostic and/or treatment procedures are completed in a timely manner.

Clinical protocols for the management of breast and cervical screening, developed by two task forces composed of clinical experts in their respective field, are utilized at all providers sites as guidelines for an appropriate course of action. Adherence to these protocols is monitored through reported data and on-site chart audits to ensure adequate follow-up of abnormal findings.

Data Collection

Data collection and management is a vital component of the breast and cervical cancer screening program. A centralized tracking, follow-up, and reminder database system has been developed to manage data for surveillance activities, to monitor screening and diagnostic follow-up activities, to conduct program evaluation, and to assess adherence to quality assurance benchmarks. Case managers must complete and submit data collection forms which include consent, demographics, health history, screening, diagnostic, and treatment information.

The function of the database system is threefold: 1) to track women who have received screening and diagnostic services through the program; 2) to ensure that women who have had abnormal screening examinations receive timely diagnostic and treatment follow-up; and 3) to remind women to return for rescreening at appropriate intervals. Data reports, including monthly rescreening lists, and data analyses, including monitoring of rescreening rates, assist case managers with program activities.

Results

Client demographics.—Demographic features collected on women enrolled in the program include age, race/ethnicity, income, and education (Fig. 1). A majority of enrolled women (78%) are between the ages of 40 to 59. While white women comprise 71% of all enrolled clients, 18% of this group are of Hispanic ethnicity. Nearly half of all clients (49%) reported annual incomes of $10,000 or less. A quarter (25%) of enrolled clients have less than a high school education and nearly half of this number failed to complete grammar school.

Program referral sources.—Information about and referral to the screening program is provided through a variety of sources. The most frequently cited source for screening referrals is medical personnel (Fig. 2), mostly primary care physicians and nurses. Information through the media (television, radio, and newspapers) was the second most cited source for gaining knowledge of services. Together, medical personnel recommendations and media information accounted for a majority (60%) of the referrals among enrolled women. Advice from friends and relatives, information provided by outreach activities, and influence of various promotional campaigns accounted for most of the remaining referrals (31%) among enrolled participants.

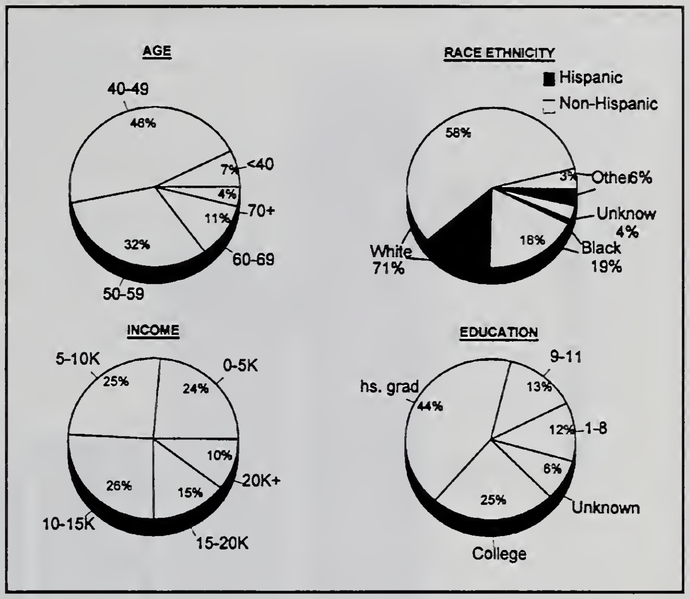

Figure 1.—Demographic profile of enrolled clients. (Enrollment from 1 October 1995 to 31 December 1997)

Previous mammogram.—Women ages 40 or older who have received one or more mammograms prior to enrolling in the program represent 66% of enrolled clients. Only 17% (Fig. 3) of these women obtained their current mammogram within the recommended ACS screening interval. The remaining women either never had a mammogram or did not have one recently enough to comply with recommended screening guidelines. Some 88% of women over age 50 had not obtained a mammogram within the year prior to their enrollment.

Client screenings.—Women enrolled into the CBCCEDP received either a clinical breast examination (CBE), a mammogram, a Pap test, or any combination of the three screening examinations deemed appropriate at the time of their visit. The total number of women enrolled into the program as of 31 December 1997 reached 5,509. This group of women generated 6,181 screening visits (Fig. 3). Mammograms were performed on 87% of these visits, CBEs on 78%, and 65% received a Pap test. Both a mammogram and a clinical breast examination were performed on 80% of all enrolled clients.

Using the CDC's National Breast and Cervical Cancer Program guidelines to classify test results, abnormal findings were recorded for 7% (360) of women receiving

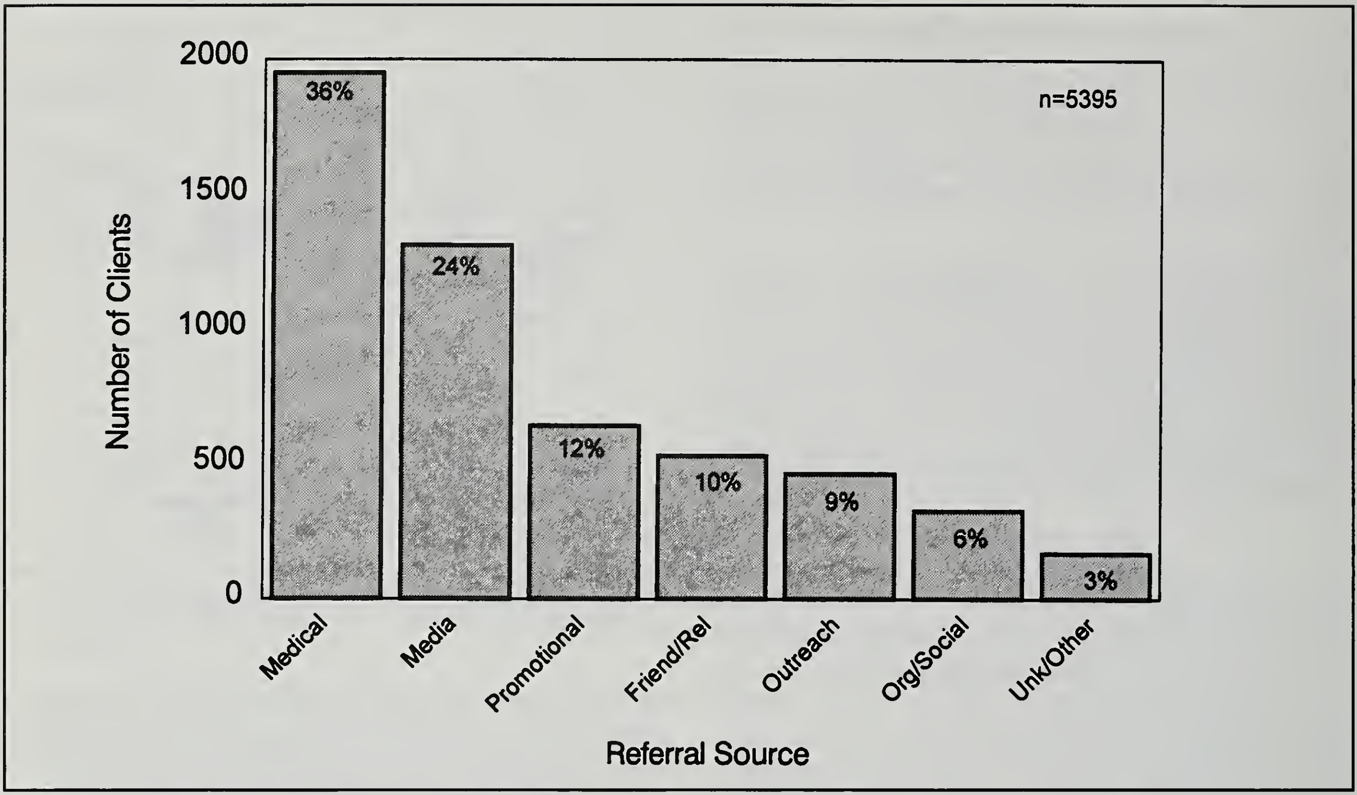

Figure 2.—Program referral sources among enrolled clients. (Enrollment from 1 October 1995 to 31 December 1997.)

clinical breast examinations and 10% (515) of clients given mammograms. Follow-up of abnormal CBE and/or mammogram results with more definitive diagnostic procedures detected 23 cases of breast cancer. Invasive breast cancer was present in 19 cases while the remaining four cases were classified as *in situ*.

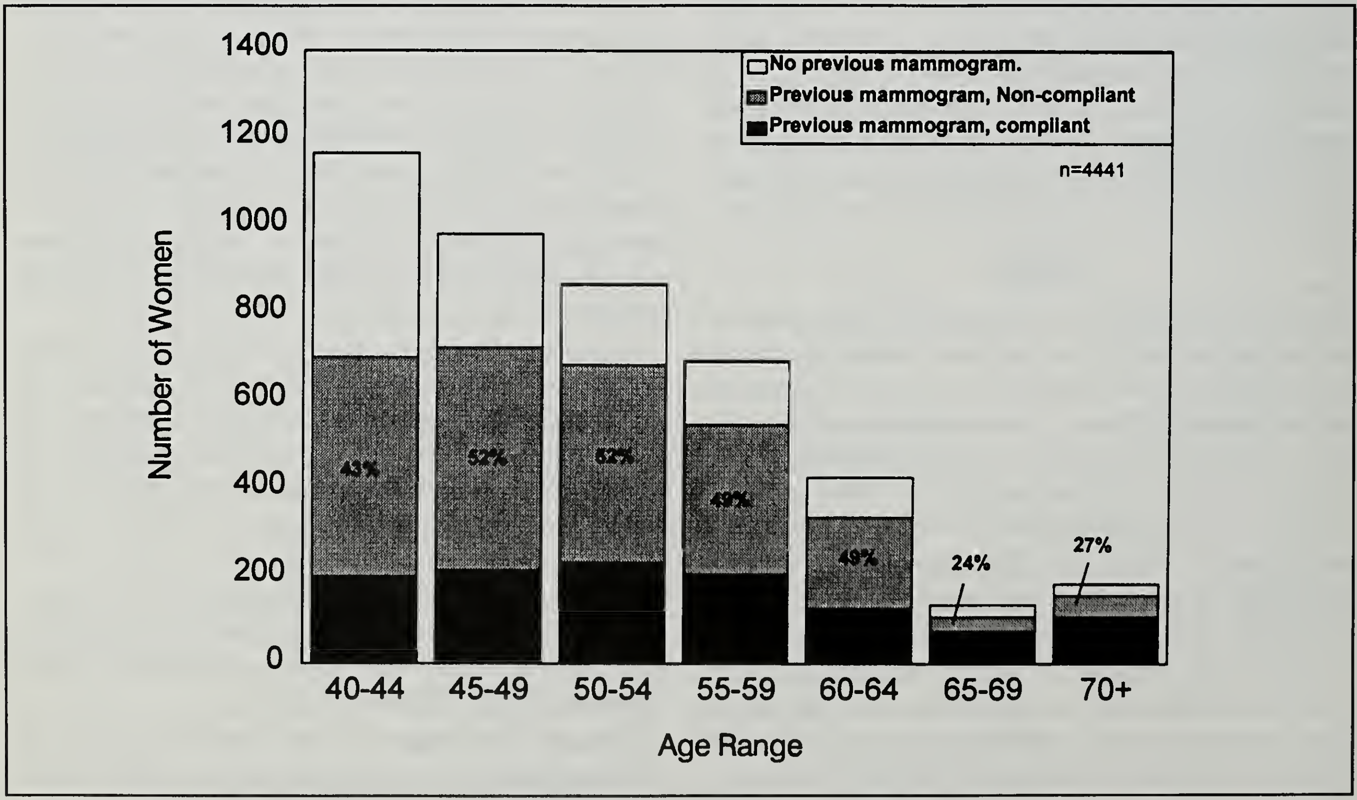

Figure 3.—Compliance with recommended intervals for mammograms among CBCCEDP enrolled women.

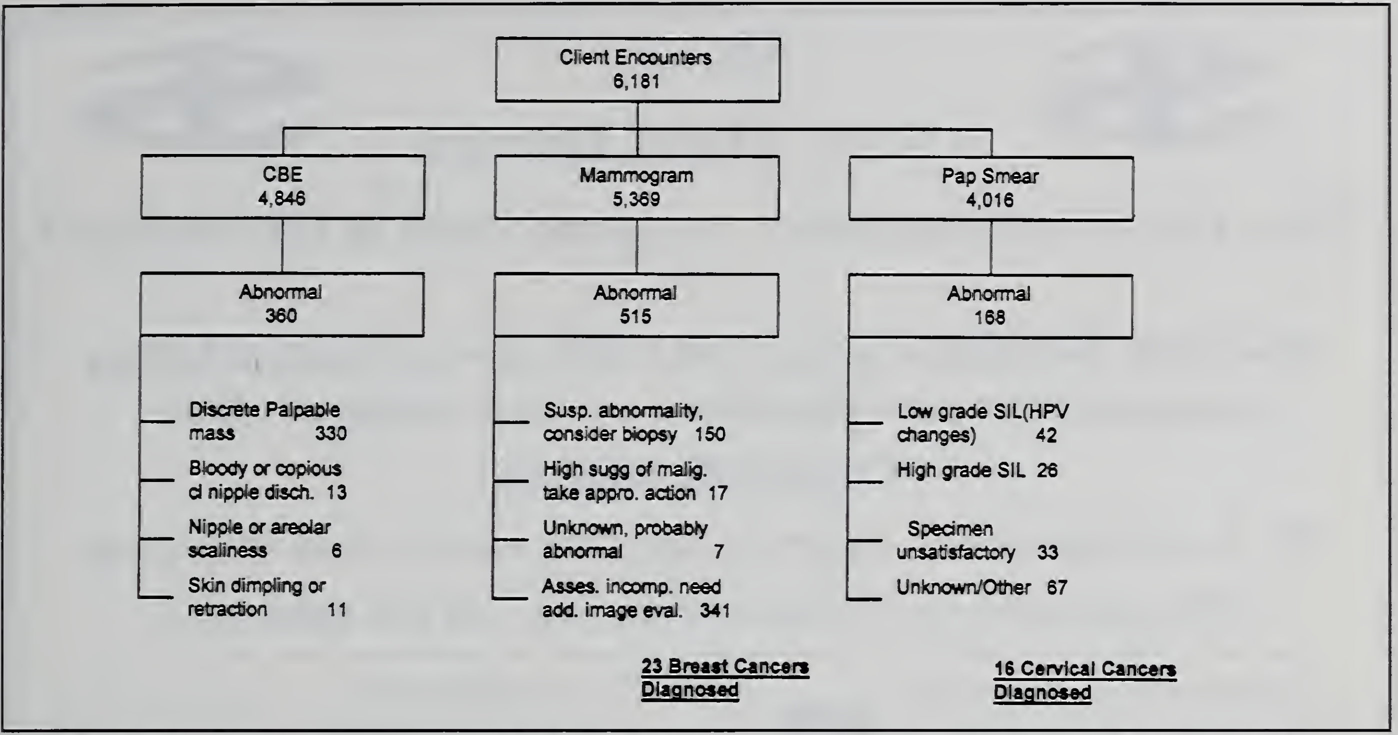
Client Encounters
6,181
CBE
4,846
Mammogram
5,369
Pap Smear
4,016
Abnormal
360
Abnormal
515
Abnormal
168
Discrete Palpable mass 330
Bloody or copious cl nipple disch. 13
Nipple or areolar scaliness 6
Skin dimpling or retraction 11
Susp. abnormality, consider biopsy 150
High sugg of malig. take appro. action 17
Unknown, probably abnormal 7
Asses. incomp. need add. image eval. 341
Low grade SIL(HPV changes) 42
High grade SIL 26
Specimen unsatisfactory 33
Unknown/Other 67
23 Breast Cancers Diagnosed
16 Cervical Cancers Diagnosed

Figure 4.—Breast and cervical cancer screening flow chart. (Includes initial and subsequent visits through 31 December 1997.)

Abnormal Pap tests were recorded for 4% of all women who obtained a Pap test. Cervical cancer was diagnosed in 16 women. With the exception of one case of invasive cervical cancer all cases were diagnosed at the early *in situ* stage.

Additionally, eight cancers other than breast or cervical (includes: melanoma, basal cell skin, uterine, vulvar, and endometrial) were detected. Appropriate treatment was made available to all women in the program who were diagnosed with cancer.

Conclusion

One of the biggest challenges in implementing an early detection program is recruiting the medically underserved population. A two-pronged approach focused on strategies targeting eligible women and informing health-care providers. As evident in the data, a particularly successful strategy was a 12-week mass media campaign which increased average monthly client enrollment fourfold. Other strategies included continuing medical education sessions and mailings to encourage physician involvement in client referrals, as well as inreach activities which included direct mailings to self-paying, eligible women selected from provider client databases to promote participation in the program.

The medical histories of enrolled clients indicate that many women are not complying with nationally recommended guidelines. Preliminary data from the CDC National Breast and Cervical Cancer Program for 1991-1996, have demonstrated the benefits of regular screening. Women diagnosed with breast cancer on the initial screening through the program were compared with women who were diagnosed after having received one or more rescreens through the program. Those women who had been rescreened were diagnosed with earlier stages of breast cancer than those diagnosed on the first screening through the program.

Efforts in the early phases of the CBCCEDP have concentrated on establishing providers of services and enrollment of clients. Ready access to provider sites by all eligible Connecticut women has recently become a reality as efforts to increase the number of provider sites in the remaining underserved areas have been completed. Although enrollment has been the priority of the program. future efforts will focus on the importance of rescreening. This is critical given that data from the Connecticut Tumor Registry indicates that nearly one-third of Connecticut breast cancers are being detected at late stages. Rescreening permits the detection of breast and cervical cancer at early, asymptomatic stages. Early detection and prompt treatment can reduce the number of deaths from breast and cervical cancer in this cohort of underserved women.

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Breast Imaging

JOHN ZIEWACZ, M.D.

MAMMOGRAPHY is the imaging procedure of choice for evaluation of the breast. Although it has limits it is well understood and readily available. Routine screening of millions of women has resulted in early cancers being found that otherwise would have progressed until clinically evident.

In 1913 the first study of radiographic assessment of the breast was performed in Berlin by Dr. Albert Salomon.[1] He correlated the radiologic findings of mastectomy specimens with pathologic findings. He was able to see the spread of tumors, microcalcifications, and separate, well defined from infiltrating tumors. A number of papers in the late 1920s and early 1930s tried to show the usefulness of breast roentgenographics in living patients. One of these, by Dr. Stafford Warren in 1930, reported on the use of stereoscopic breast roentgenographics in 119 patients who went on to surgery.[2] There were eight errors in interpretation of those 119 patients. These studies were performed using general radiographic equipment and exposure factors that were high by today's standards. Despite these papers, the interest in widespread use of mammography didn't occur, in part due to the difficulty in reproducibility of high-quality images and results.

It wasn't until 1960, when Dr. Robert Egan modified radiologic equipment, that consistent high-quality imaging of the breast was achieved.[3] He did this by using a low kilovoltage beam, limiting filtration, controlling scatter, and using industrial film. He was also able to find occult cancers using his techniques. This led to a multi-institutional study to see if this technique could be generally useful. The report, by the United States Health Service, the National Cancer Institute, and M.D. Anderson (1965), determined that it could be easily taught, would be useful, and could be used as a screening tool.[4]

Since that time a great deal of improvement has occurred which has led to higher quality images with lower dosage than the early machines. This is not just related to the mammographic equipment itself, but also to faster and more efficient film-screen combinations as well as film processor development.

Screening

The reason for any screening examination is to find an abnormality when it can more easily and successfully be treated. In mammography this means that we want to be able to find tumors before they have spread to the lymph nodes. Tumors less than 1 cm in size are about half as likely to have nodal metastases than those over 2 cms. Over the years, beginning with the New York Health Insurance Plan (HIP) in the 1960s, many studies have been conducted to see if this is possible. In the HIP study, fatality rates were 14% in those detected by mammography, 32% in those found by physical examination, and 41% in those found by both methods.[5] This improvement in survival was confined to women over age 50, while those between 40 and 50 showed no statistically proven survivability. However, this data was collected with mammography equipment from the 1960s. Enormous improvement in techniques, resolution, and dosage of radiation have been made since that time.

Another study was conducted by the National Cancer Institute (NCI) and the American Cancer Society (ACS) between 1973 and 1981. This was the Breast Cancer Detection Demonstration Project (BCDDP). This study was used by the ACS to recommend routine screening for

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women over age 40. It demonstrated that screening would improve five-year survival when compared to data from the Surveillance, Epidemiology, and End Results (SEER) program. Survival rates were 91% and 89% for women over and under 50 respectively.[6] This is compared with the SEER data where the survival rate was only 74% for women under 50.[7]

What makes these and other studies difficult to compare is the different methods and intervals used for screening. Some were done with a single view while screening intervals varied from one to two years for most. The highly publicized Canadian trial,[8] for example, had no control of the quality of mammography performed. In addition many women with advanced cancers were put into the mammography arm of the study.

Currently the American Cancer Society and the American College of Radiology recommends annual screening for women from age 40. This recommendation is based on the analysis of many trials including those from Malmo[9] and Gothenberg.[10] The more rapid growth rate of tumors in premenopausal women supports this recommendation.

Occasionally women younger than 35 will present with a clinical finding of a palpable lump. The parenchymal pattern of younger breasts is generally denser than in older women. This decreases the usefulness of mammography in these patients. However it may be necessary in the right clinical situation. In women younger than 20 years old ultrasound should be the only imaging modality employed. While ultrasound is not good as a screening tool, it is quite good at defining a discreet focus. For women aged 20 to 30, ultrasound should be the initial imaging device used, with subsequent mammography if the lesion is found to be solid. Women over 30 years of age can have mammography and follow the same diagnostic procedures as older women.

Some younger women should start screening examinations earlier than the general population. In those women who have a first degree relative with premenopausal breast cancer screening should start at least five years before the relative's age when the cancer was found. Screening can then proceed every one to two years depending on the strength of the family history.

Younger women who have already had breast cancer should undergo annual screening. Also, women who have had a biopsy that showed atypical ductal hyperplasia should undergo annual screening mammography.

Routine mammography today consists of two views of each breast. These are done in the craniocaudal (CC) and mediolateral oblique (MLO) directions. The CC view is obtained with the breast compressed from top to bottom. This view optimizes imaging of the medial aspect of the breast while the MLO projection optimizes imaging of the lateral aspect of the breast and the axillary tail. It is done with the breast compressed parallel to the pectoralis muscle. Compression is used to provide a more uniform thickness of the breast, to spread out overlapping structures, to reduce scatter and dose, to increase resolution, and to reduce the likelihood of motion. The MLO projection should show the pectoralis muscle down to the level of the nipple in most cases. On the CC view the distance from the nipple to the back of the breast should be within 1 cm of the distance from the nipple to the pectoralis muscle on the MLO projection. This assures that a sufficient amount of posterior breast tissue is being imaged. The exposure should allow visualization through the densest portion of the breast. These and many other criteria are used by the radiologist to assess the adequacy of the examination. While not all examinations can be optimal they can all be optimized.

These two views form the screening examination and are the basis for obtaining additional views.

After the initial views are obtained and evaluated by the radiologist, he or she may recommend additional views to clarify a finding. There are a number of additional views which can be obtained depending on where the lesion is and what it looks like. One of the most common is a spot film with or without magnification. This is done by compressing a smaller part of the breast with a special paddle. This allows more compression in this small area and spreads out the tissues more completely to limit the amount of overlap seen on the film. This is useful in assessing the margins of a mass or to view more closely the morphology of calcifications (especially with magnification).

The axillary tail is best viewed on the MLO projection. When a lesion is seen in this area an attempt should be made to locate it on a CC view. This may necessitate an exaggerated CC view which sacrifices visualization of the medial breast in order to see the axillary region. This can also be done with exaggeration toward the medial side in order to see that area to best advantage. Other views such as the cleavage view, Cleopatra view, and rolled views may be used in specific situations.

One of the most useful views is the straight mediolateral (ML) view. While the axillary tail is not as well seen as on the MLO projection the horizontal beam is helpful in confirming the presence of "milk of calcium" cysts.

The reason for these views is not just to see if there is an abnormality, but to try and characterize it as much as possible. It can then be graded into one of several different groups based on the likelihood of malignancy. The abnormalities generally fall into one or more classes; masses, microcalcifications, architectural distortion, or asymmetric density.

Findings

Masses are classified mainly on the basis of their margins with support from other criteria. They are classified as either characteristically benign, probably benign, suspicious, or characteristically malignant.

Characteristically benign lesions include degenerated firoadenomas, oil cysts, intramammary lymph nodes, lipomas, and hamartomas. While not all of these lesions have the characteristic features, if they do they can be dismissed as benign. When strict criteria for inclusion into this category is followed, the risk of malignancy is 0% for that mass.[11]

To be called "probably benign" a mass must be solid, round, oval, or have a macrolobulated margin, the margin must be circumscribed except where obscured by overlapping tissue, and there are either no previous films to compare with or there has been no interval growth. These masses will have a 2% to 4% chance of malignancy[12] and can safely be followed up in six months. These lesions should go to ultrasound to determine if they are solid. If they are solid they fit this category, but many of these lesions will fall into the characteristically benign group if they are found to be simple cysts.

Those masses that are highly suggestive of malignancy are spiculated and may also contain microcalcifications. They should be visible on two views. Besides a malignancy these masses could also be due to postsurgical scarring, abscess, hematoma, and fat necrosis. Unless history or clinical findings can confirm one of these other possibilities these should all be considered carcinoma until proven otherwise. The likelihood of malignancy in this group is over 80%.[13]

The suspicious category is the most problematic since the likelihood of malignancy is between 4% and 80%, falling nearer to 40%. These are masses that don't fit the other categories. The margins are indistinct or microlobulated, there is no spiculation, or an otherwise probably benign lesion is found to be growing on yearly mammograms. These lesions need some type of biopsy to rule out malignancy. Masses are very amenable to core biopsy, either under ultrasound guidance or stereotactically.

Calcifications similarly can be classified into one of several categories based on morphology, distribution, and associated findings. There are many types of benign calcification that can be distinguished by their morphology. Skin calcifications are small, round, or oval, and have a central lucency. Parallel lines of calcification are typical for arterial calcification. Secretory calcifications look like smooth elongated bowling pins. Fibrocystic disease can produce a variety of calcifications, some of which are benign in appearance while others are more suspicious. Eggshell calcifications are typically seen in a cyst wall and fibroadenomas degenerate by producing popcorn calcifications. All of these different types are easily recognizable once they have been encountered a few times.

One type of calcification that sometimes causes problems is "milk of calcium." On the CC view these look slightly indistinct or hazy and on the MLO view they are more sharply demarcated. The key to identifying them is to get a straight lateral view which will then show a meniscus of the calcium layering out.

Calcifications that are more suspicious are clusters of calcifications that are amorphous or heterogeneous in morphology. Those that are irregular, fine, and branching suggest growth within a duct system and are suspicious for ductal carcinoma *in situ* (DCIS).

A single cluster of calcifications is more suspicious than multiple scattered groups, but each should be evaluated on its own merits. Scattered individual calcifications are not suspicious; however if they are all in one segment of the breast they could represent a segmental carcinoma.

The most worrisome associated finding for calcifications is a mass. When they occur together and can't be definitively identified as a benign finding (such as a cyst or fibroadenoma) they should be biopsied. While core biopsy can easily be performed the accuracy is slightly less than for a mass. This is particularly true if the calcifications are few in number and not tightly clustered. In this case one must be sure to include calcifications in the biopsy specimens. Other alternatives to simple core biopsy include the Mammotome (Biopsys Medical Inc., Irvine, Cal.) device which applies suction to increase the size of the biopsy and the Advanced Breast Biopsy Instrumentation (ABBI, US Surgical, Norwalk, Conn.) device which obtains core samples up to 2 cms in diameter.

Besides focal masses or calcifications there are other imaging findings which can be suspicious. These include asymmetric breast tissue, an asymmetric density or dilated duct. Combined, these findings have a malignant yield of less than 15%,[14] but still need to be fully evaluated. While breast parenchyma is normally symmetric it also is dynamic, changing with hormonal variation, pregnancy, lactation, caffeine and other exogenous drugs. Post menopausal women often exhibit a change in their breast parenchyma after commencing hormone therapy. Normal asymmetric tissue often can be attributed to one of these causes as long as there is no palpable finding, there are no associated findings (like calcification), and there is no focal mass.

An asymmetric density is seen on only one view. If it is on two views it then should be considered a mass. A concerted effort should be made to assure that it is not obscured by dense breast tissue. Additional views with spot compression may therefore be needed. An ultrasound may be useful for further evaluation. As with masses, any change from prior examinations must be accounted for.

One specific type of asymmetry is the asymmetrically dilated duct. This is seen as a smooth elongated structure oriented along normal ductal tracts. Ducts are most common in the subareolar region and may be multiple and bilateral. When one is visualized or is asymmetrically dilated then the possibility of an intraductal lesion should be considered. Most often these are papillomas, but they can also be associated with intraductal carcinoma. Patients with papillomas often present with a nipple discharge. A ductogram can be done to outline the involved ductal system. This is done by inserting a small cannula into the duct and injecting contrast material. A mammogram is then performed that will show a filling defect if there is an intrinsic lesion. A blue dye can be instilled to guide the surgeon in removal of the appropriate duct. The ductal system can also be evaluated by ultrasound and if a mass is seen within the duct a core biopsy can be done under ultrasound guidance.

The augmented breast.—The augmented breast presents a problem in imaging since the prosthesis obscures a large portion of the remaining breast tissue. Routine mammograms are obtained as well as Eklund views.[15] These are obtained in the normal projections but the prosthesis is first compressed against the chest wall, behind the compression paddle, to get them out of the reentgenographic beam. This allows better visualization of the anterior breast tissue. Despite this maneuver portions of the breast will not be fully visualized. The amount of breast tissue not visualized will vary with the position of the prosthesis (subglandular or subpectoral), the size of the prosthesis, the size of the native breast, and the degree of capsular contracture.

Besides evaluating the breast for signs of malignancy the augmented breast is also evaluated for conditions related to the prosthesis. Contracture is due to formation of a fibrous shell around the prosthesis. This is a normal response of the host to a foreign body. While all prostheses have some degree of fibrous capsule not all develop clinical complaints. These can range from mild discomfort to a fixed, hard, rounded mass. When the latter occurs mammography is limited since the breast is immobile and noncompressible.

Another common problem with implants is rupture. There is evidence that almost all silicone implants will "bleed" through an intact prosthesis. This silicone most often accumulates in a subcapsular position, but may find its way to distant sites. This minute leakage is not generally visible by mammography. A rupture of the capsule may also result in accumulation of silicone in a subcapsular location which can cause a contour abnormality on the mammogram. Since silicone is so dense, this is seen when the roentgenographic beam is tangential to the leakage. Silicone may also rupture beyond the fibrous capsule where it is then free to migrate distally. It may be seen as dense globules within the breast parenchyma, the lymph nodes, or elsewhere.

Other methods of evaluating implants include ultrasonography and breast magnetic resonance imaging (MRI). These are done to evaluate for implant rupture. Silicone is anechoic within the prosthesis and when in large droplets. If there is a subcapsular rupture the prosthetic envelope will appear as linear echoes within the silicone. A similar finding is seen on MRI as multiple folds of the envelope are sliced through. Care must be taken with either modality not to interpret a normal fold of the envelope as a rupture. Experience and evaluation of all slices and planes should avoid this pitfall. When there is free rupture the ultrasound can have a snowstorm appearance as the tiny globules of silicone migrate through the breast parenchyma.

Ultrasound

Ultrasound is a useful adjunct to mammography in evaluation of the breast. In very young women it is the best way to characterize a palpable lump and should be the only modality employed. In older women it can be used if the mammogram doesn't show an abnormality or if it shows a well-defined mass. Up to 10% of palpable masses are not seen on mammography.[16] A negative mammogram in this setting is not an indication that there isn't a malignancy and ultrasound can often visualize the lesion. Ultrasound has traditionally been used just to determine if a mass is solid or cystic. To be considered a simple cyst the mass must have a well-defined border, be anechoic, and show through transmission of sound energy. If any of these criteria are not met then it can't be categorized as a simple cyst. Low level echoes in an otherwise simple cyst may be due to blood or other debris within the cyst or it may represent a solid mass.

More recently, ultrasound criteria of benignity and malignancy have been defined. The margins of the mass are the most useful for criteria. As in mammography a sharp, well-defined border is consistent with a benign process. The more indistinct the edge the more likely the lesion is a malignancy. There are also acoustic phenomena which aid in characterization. Malignancies are more likely to be inhomogeneous and low in echotexture, exhibit posterior shadowing, and be noncompressible. Benign processes have the opposite features, although there is some overlap such as fibroadenomas which are low in echogenicity. The final determination of whether a mass is worthy of biopsy should be made after reviewing all the pertinent information, including the patient history and risk factors, the physical findings, and the mammographic and ultrasound findings.

If a decision is made to biopsy a nonpalpable mass that is seen by ultrasound, the quickest, easiest, and most cost-effective method is to do it under ultrasound guidance. An experienced radiologist can do this within a few minutes with minimal patient discomfort and with an accuracy comparable to stereotactic localization.[17] If a lesion is found to be a cyst and the patient wishes to have it drained, it also can be done easily under ultrasound guidance.

Nuclear Medicine Imaging

Thallium and more recently Tc-99m sestamibi are cardiac imaging agents that have been found to concentrate in tumors as well. Sestamibi gives better resolution images due to the higher energy of its gamma emissions which are more closely tuned to standard gamma cameras and is now the imaging agent of choice in evaluating the breast. There have been numerous studies evaluating its potential in determining benign from malignant lesions. These studies consistently demonstrate sensitivities and specificities of about 90%.[18] Care must be taken to obtain the examination during the midportion of the menstrual cycle to avoid excessive false positive results.

There are several areas of concern which have kept nuclear imaging from being more fully utilized. The studies mentioned above compare scintimammography with conventional mammography, but purport not to be a screening tool. When compared to mammography the sensitivity and specificity, as well as the positive and negative predictive values, appear quite good. However, the lesions in question have already been identified by mammography or palpation and the question is whether or not they are malignant. Therefore, scintimammography should be compared with biopsy techniques which are the current method of answering this question. While stereotactic core biopsy has an overall false negative rate of about 1%,[19] needle localization and excision is about the same or slightly higher, and scintimammography has a false negative rate of around 5% or more.[20] This makes clinicians reluctant to rely on this method to determine if a malignancy is present unless you are willing to accept that much of a "miss" rate. Close follow-up examinations would be necessary to try and pick up this 5% before the tumors progressed very far.

Another problem with scintimammography is with nonpalpable lesions. The studies quoted above deal with tumors that are largely palpable or larger than 1cm. In todays environment of routine screening mammography a higher percentage of lesions are found at less than 1 cm or manifest as microcalcifications alone. In a study done at Massachusetts General Hospital the overall sensitivity was only 29% in patients undergoing needle localization for nonpalpable lesions.[21]

Despite these problems there are areas where scintimammography may be useful. In patients with dense breasts, where conventional mammography has a lower sensitivity, scintimammography may play a role as an adjunct to screening. It may also be useful in patients who have scarring from previous surgery, have had radiation therapy, or have breast implants. Further improvement in scanning techniques and equipment may also improve its usefulness.

MRI

Magnetic resonance mammography (MRM) is a potentially useful method that is still in the developmental stage in regard to breast cancers. MRM is used for the evaluation of implants, but the sequences and equipment necessary to detect carcinoma is still being debated in the literature. One of the problems is the myriad of options available to image the breast. Currently, high-quality breast coils with the patient in the prone position is the standard method to obtain images. The imaging sequences have various proponents, but most involve some kind of T1 weighted sequence without and with gadolinium enhancement. Uptake of the gadolinium is measured over a short period of time (less than five minutes). When tumors enhance they do so rapidly while benign processes enhance at a slower rate. This is the basis for separating lesions into benign and malignant categories.

As with scintimammography MRM works best in lesions greater than 1 cm. in size. In addition there are false positive and false negative results which result in sensitivities and specificities of around 90%.[22] Many people continue to develop MRM by devising methods to localize abnormalities under MRM guidance, evaluate different imaging parameters, and assess techniques to improve resolution. These may lead to more widespread use of MRM if the costs can be lowered and a significant improvement in detection and differentiation can be achieved consistently. It may become useful in women with very dense breasts or to evaluate muticentricity of tumors. Currently its most useful role is in evaluating implant patients.

Imaging for Interventional Procedures

Within the past several years procedures have developed to aid in biopsy of the breast. Conventional biopsy of a mammographically found, nonpalpable lesion has been by needle localization and surgical incision. In most practices this has had a positive biopsy rate of around 20% to 30%. Therefore, up to 80% of patients were getting biopsied for benign disease. Core biopsy of the breast is ususally done with a 14-gauge needle. This removes a much smaller amount of tissue from the breast, but can be as accurate in diagnosing cancer as an excisional biopsy.[19] They are performed either under ultrasound guidance or by stereotactic localization.

Ultrasound guided biopsy is the simpler and quicker method, but can only be used if the lesion is visible by ultrasonography. This procedure can be done in about 10 minutes using local anesthesia. Stereotactic localization takes somewhat longer and requires specialized equipment which first needs to be calibrated accurately. This can be done on a stand-alone biopsy table with the patient in a prone position or can be done with certain add-on devices which attach to a mammographic unit. Both are guided by stereoscopic views of the breast with localization of the X,Y, and Z coordinates either on a digitizing screen or more commonly by digital roentgenographic rays on a computer screen.

The advantages of these methods include a quicker procedure that is less costly, causes less cosmetic defect, doesn't alter the mammogram, and is as accurate as conventional excision. There are some women who are not candidates for the procedure due to body habitus, position of the lesion, or general medical condition. The radiologist or breast surgeon can determine who is the best candidate for these procedures.

Another biopsy device that has recently come onto the market is the ABBI device mentioned above. It is similar to a prone core biopsy table, but removes a core of tissue between 5mm and 2cm in diameter. This requires a larger incision and causes a larger defect, but may be useful in lesions that are more amorphous and for microcalcifications that are not tightly clustered. In these cases a conventional core biopsy may suffer more from sampling error.

In this era of increased cost consciousness and outpatient procedures the methods described above should continue to become more prevalent.

Conclusions

Mammography will continue to be the screening method of choice for the breast in the near future. It will be augmented by developments in MRI and nuclear medicine to help define benign from malignant disease. Mammography itself will give way to digital mammography as that technology continues to improve. Digital mammographic systems have already been devised and digital imaging is being used in stereotactic devises. Further improvements may come about by computer enhancement of these images once they are digitized. "Smart" systems will point out areas of interest for further evaluation. More specific radiopharmaceuticals may some day obviate the need for biopsying a lesion to see if it is malignant and may show us where any metastatic foci are.

The future of breast imaging is bright with expectations that breast cancer will be found at its earliest and most curable stages.

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Systemic Adjuvant Therapy of Breast Cancer

JOSEPH O'CONNELL, M.D.

ABSTRACT—Following local excision, the prognosis for long-term cure of a patient with breast malignancy depends on the presence of micrometastatic disease. The risk of occult disease present prior to removal of the primary tumor can be assessed by knowledge of the tumor size, histology and degree of differentiation, and spread to axillary nodes. It ranges from 25% in node-negative tumors to as much as 75% to 80% in the presence of multiple involved nodes. Systemic therapy can reduce the risk by approximately one-third. Present studies indicate that regardless of age or menopausal status the majority of women should be considered for chemotherapy (if hormone receptor negative) or chemotherapy and tamoxifen (receptor positive). However, it is hoped that further refinement of our knowledge of prognostic factors will allow better design of adjuvant therapy through better understanding of the mechanisms of tumor growth and spread.

THE benefit of systemic therapy in addition to local treatment (mastectomy or breast-conserving surgery followed by irradiation) was first established over 20 years ago in young patients with axillary node metastases. This approach is now accepted practice in almost all pre- and postmenopausal women, both with and without axillary node metastases, and for all but the smallest primary tumors.[1–3] Thus, surgical and medical oncologists today can advise nearly all women from the first discussion of diagnosis and treatment that systemic therapy will be a part of the attack on their illness. Put another way, one needs to be highly selective in choosing women who potentially will not benefit from such treatment, and one of the primary goals of ongoing studies is to identify prognostic factors which will identify those patients whose prognosis is so favorable as to preclude the need for adjuvant treatment.

How to counsel patients, therefore involves: 1) appraising the risk of recurrence through assessment of the pertinent prognostic factors of the individual tumor; 2) determining the magnitude of benefit in terms of the expected reduction in risk of metastatic disease; and 3) informing patients of the potential toxicities of treatment.

Risk of recurrent disease.—While a great number of clinical features, pathologic characteristics, and molecular markers have been touted as providing prognostic information to predict which patients will be most likely to develop recurrent disease, in 1998 the simple and time-honored features of tumor size, histologic grade, and extent of nodal involvement are the crucial independently predictive factors on which to base recommendations regarding adjuvant systemic therapy.

Tumor size directly correlates with the frequency of recurrent disease (see Table 1), independent of the number of involved axillary nodes or any other clinical feature.[4] Note that in node-negative women, even infiltrating ductal tumors above only 1 cm in size are associated with a recurrence rate of over 10% in the first five years post-surgery. Therefore, with the exception of tumors below 1 cm, systemic therapy is a consideration in order to reduce the risk of fatal metastatic disease. Whether to proceed with such treatment depends on the patients prognosis from comorbid illness and willingness to accept the potential for some toxicity.

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Table 1.—Recurrence rate by tumor size and nodal status, in the absence of adjuvant therapy

Tumor size	Node-negative	Node-positive
< 1 cm	< 10%	
2–5 cm	20%	60%
> 5 cm	25%	80%

Note that these guidelines apply to cases of infiltrating ductal cancer (78% of all invasive breast malignancies) and infiltrating lobular cancer (9%). An exception should be made for patients with a few uncommon but favorable histologic subtypes of breast cancer. Medullary (4% of all breast cancers), colloid (4%), and papillary (2%) recur much less frequently, and ordinarily in the absence of nodal metastases are not treated with adjuvant drug therapy unless the primary lesion is over 3 cm.[5]

Histologic grade, as assessed by the pathologist based on cellular and nuclear features, correlates with ultimate outcome,[6] and the data presented in Table 2 are illustrative regarding the long natural history of breast cancer. Unlike colon cancer, lung cancer, or lymphoma, in breast cancer the risk of recurrence persists at a steady rate well beyond the five-year mark. Given the increased frequency of detection of breast cancer through mammographic screening, with about 65% of cases now being diagnosed before there has been spread to the sampled nodes, and in view of the continuous risk of relapse—about 1.5% to 2% per year in years five to 12 postsurgery—it appears clear that even patients with small, node-negative but poorly differentiated grade 3 tumors may benefit from adjuvant treatment, especially if they are fairly young.[7]

Lymph node involvement was the first and is still the most consistent and significant clinical variable used to assess patient risk (Table 3). Though this classically has been based on a sampling of accessible Level I/II nodes, with pathologic analysis of at least five to 10 nodes, recent data on sentinel node biopsy has created a great deal of enthusiasm for this procedure which avoids the risks, especially lymphedema, of axillary dissection. Furthermore, recent data regarding the issue of whether to use hormonal treatment *vs* chemotherapy suggests that the optimum adjuvant treatment is to administer both nodalities to all receptor-positive patients regardless of nodal status since the effects are additive. Only if future trials demonstrate that the *number* of involved nodes proves to be an effective way to preferentially select patients for different adjuvant chemotherapy regimens based on the degree of risk (eg, high-dose chemotherapy with stem cell support for patients with 10 or more involved nodes), would it be likely that the present standard of axillary dissection will survive as an important component of breast cancer surgery.

Table 2.—Influence of histologic grade on disease free survival rates

Five-year disease free survival		
Node-positive patients:	Grade 1	68%
	Grade 2	33%
	Grade 3	20%
Fifteen-year disease free survival		
Node-negative patients:	Grade 1	49%
	Grade 2	29%
	Grade 3	25%

Table 3.—Recurrence rates by degree axillary lymph node involvement, in the absence of adjuvant therapy.

No. of involved Nodes	Five-year recurrence rates
0	75%
1–3	60%
4–10	55–40%
> 10	25%

Other prognostic factors, as well, have been identified to be predictive of relapse. These include pathologic characteristics such as lymphatic or vascular invasion by the primary tumor; proliferative indices such as flow cytometry/ S-phase determination; oncogene products; and enzymatic markers of local invasion such as cathepsin-D. To date such studies have suffered from several methodologic problems (eg, the use of different cutoff values to define significance in different reports, lack of standardization of laboratory methods), and conceptual difficulties (eg, failing to use findings of pilot trials to verify the hypotheses in larger data sets, and the overuse of subset analysis).

Perhaps S-phase analysis by flow cytometric methods comes closest to being a valuable laboratory parameter to help guide adjuvant therapy, in that it has been found to be a predictor of relapse independent of other clinical parameters. In a study of tissue samples from a trial performed in the 1970s of simple *vs* radical mastectomy, the National Surgical Adjuvant Breast Program (NSABP) found S-phase to be an independent factor predicting risk of recurrence.[8] However, as can be seen in Table 4, the magnitude of the difference in survival was not sufficient to identify a cohort of patients whose survival was so good as to be able to recommend that they would not benefit from adjuvant therapy.

Table 4.—Ten-year survival by S-phase category and selected other clinical characteristics

	Nuclear grade		Tumor size		Nodal status	
	poor	**good**	**0–2.0**	**2.1–4.0**	**Neg.**	**Pos.**
Low S-phase	41%	57%	73%	52%	60%	39%
High S-phase	41%	38%	52%	42%	40%	37%

Thus, to date, none of the many additional clinical and biochemical parameters studied have yet made a convincing impact on or ability to select patients for whom adjuvant therapy is or is not justified.

Magnitude of benefit of therapy.—Since the initial studies of prolonged (36 to 52+ weeks) adjuvant therapy in high-risk (ie, node-positive) breast cancer 20 years ago, hundreds of studies comprising 10s of thousands of women have been carried out to better define the appropriate drugs, doses, and duration of therapy. The Early Breast Cancer Trialists' Collaborative Group has organized the primary data on all randomized adjuvant trials published in the world's literature, and published these results in 1992 in *Lancet*.[9] This study included all randomized trials of polydrug chemotherapy, hormone therapy (tamoxifen or ovarian ablation), and chemotherapy plus hormone therapy. These significant data are summarized in Table 5. In broad terms, then, one can advise an individual patient that the benefit of systemic treatment is an approximately 30% reduction in the odds of recurrence—whether that chance is as low as 15% for a small, node-negative, moderately differentiated lesion or as high as 75% for a moderately large tumor that spread to four to 10 lymph nodes. Knowing the magnitude of benefit, one needs to select the type of therapy in order to advise of the risk of toxicity.

Table 5.—Results of adjuvant therapy, from 1990 Overview of the Early Breast Cancer Trialists' Collaborative Group

Age	**Therapy**	**Reduction in annual odds of recurrence**
< 50	Tamoxifen *vs* no drug	27 +/- 7%
	Chemo *vs* no drug	37 +/- 5%
> 50	Tamoxifen *vs* no drug	30 +/- 2%
	Chemo *vs* no drug	22 +/- 4%
	Chemo+tamoxifen *vs* chemo	28% +/- 5%
	Chemo+tamoxifen vs tamoxifen	26% +/- 5%

Choice of adjuvant regimen.—Until the last several years, the guidelines for choice of which adjuvant therapy to give to which patients were fairly distinct. Younger, premenopausal patients were given chemotherapy, older patients with tumors that showed positive assay for estrogen and/or progesterone receptors protein were given tamoxifen, and postmenopausal patients with receptor-negative tumors were administered chemotherapy (unless comorbid disease were felt a relative contraindication, or they were too elderly, eg, their expected survival was too limited for improvements in five-year survival from breast cancer to be a meaningful goal).

However, with current studies demonstrating that both pre- and postmenopausal patients with estrogen receptor-positive tumors may benefit from tamoxifen, and with new data that the combination of tamoxifen and chemotherapy is superior to either alone in postmenopausal women, the best recommendations regarding adjuvant drug therapy are again in flux. This year data were presented by the NSABP demonstrating that participants with node-negative but receptor-positive tumors, regardless of age, menopausal status, or tumor size, benefited from the combination of chemotherapy and tamoxifen.[10] In this study of patients with relatively low risk of recurrence (15% to 25% recurrence at five years), there was a 3% to 4% improvement in disease free and overall survival at five years in patients who received chemotherapy and five years of tamoxifen compared to tamoxifen alone.

It certainly can be anticipated that therapy will continue to change, as new studies come to bear on the attempt to devise more effective systemic treatment. Additional future influences on the decision of which regimen to prescribe will be resolution of the issue regarding the strategy of dose-intensive therapy for women in the highest risk category (more than 10 involved lymph nodes), and the development of new drugs (paclitaxel or Taxol, and docetaxel or Taxotere) showing sufficient efficacy in the treating of metastatic disease that they are now felt superior to the previous "best" agents (doxorubicin) and are beginning to be incorporated into studies in the adjuvant setting.

By far the most common currently accepted chemotherapy regimens include:

CMF: cyclophosphamide + methotrexate + fluorouracil.

CAF: cyclophosphamide + doxorubicin (Adriamycin) + fluorouracil.

CA: cyclophosphamide + doxorubicin.

Treatment has usually been administered for four to six months, though in a study by the National Surgical Adjuvant Breast Project[11] it was shown that a regimen of cyclophosphamide-doxorubicin given every three weeks

Table 6.—Some toxicities, and potential additional benefits, of tamoxifen[12]

Toxicities

Uncommon (< 20%)

fatigue
hot flashes
nausea (<10%)
edema, weight gain

Potential beneficial effects:

decreased total and low-density lipoprotein
decreased incidence myocardial infarction
preserved bone density
decreased incidence of contralateral breast cancer

Rare (<2%)

anorexia
depression
endometrial carcinoma
thrombophlebitis
vaginal discharge
dermatitis
ophthalmologic degeneration

Table 7. —Some toxicities of chemotherapy[12]

Toxicities

Uncommon (< 25%)

alopecia
(total alopecia is near universal with doxorubicin, moderate to severe alopecia about 30% to 40% with CMF)
amenorrhea, hot flashes

Common (<25%)

nausea
neutropenia
edema, weight gain

Uncommon (<10%)

stomatitis
anemia
thrombopenia
neutropenic sepsis

for four cycles was equivalent to six cycles of CMF. Though alopecia was universal, therapy was completed in only nine to 10 weeks.

The most common toxicities of systemic therapy are listed in Tables 6 and 7. With shortening of the duration of therapy, the occurrence of secondary leukemia has not been found to be an issue as it was in older regimens which included 12 to 24 months of alkylating agent therapy. Furthermore, with newer antiemetics acting at the serotonin receptor (granistetron or Kytril, ondansetron or Zofran, and dolesetron or Anzemet) acute nausea and emesis are far better, though not universally, controlled.

Future directions.—At this time there are several new chemotherapeutic agents that have demonstrated significant activity in metastatic breast cancer. Their incorporation into adjuvant therapy regimens will be defined over the next several years. This includes the taxanes, vinorelbine, and gemcitabine. Since the endpoints in adjuvant trials take some time to occur—five to 10 years of follow-up—and many patients need to be enrolled and treated to enable clinically meaningful, statistically significant differences to emerge, such changes in drug combinations will not occur quickly.

More accurate estimation of risk through identification of newer, more precise prognostic factors may allow us to select for systemic treatment those patients at greatest risk, and spare those who by the classic criteria of tumor size, grade, and nodal status are likely cured but for whom there is enough risk of relapse to presently recommend therapy.

More importantly it is hoped that the identification of molecular and genetic factors associated with prognosis will generate a better understanding of the basis of carcinogenesis, invasion, and metastases leading to more effective and less toxic weapons against the eventual occurrence of relapsed metastatic breast cancer.

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Psychological Aspects of Breast Cancer

VICTORIA R. MORROW, M.D.

ABSTRACT—This paper reviews the common psychological concerns expressed by women with breast cancer. It also reviews the epidemiology of psychiatric diagnoses in this population. The special diagnostic problems and available pharmacological and psychotherapeutic interventions are discussed. The aim of psychiatric treatment in breast cancer patients is to relieve major psychological symptoms as well as to address underlying intrapsychic conflicts that become prominent during treatment.

Introduction

ALTHOUGH it is not invariably deadly, breast cancer is one of the most dreaded malignancies to afflict women. This illness has special significance for affected women because the breast is associated with sexuality, femininity, and maternity. In addition, breast cancer victims share the problems of cancer patients in general: fear of pain and death, concerns about bodily integrity, and anxiety about dependency. Patients with life-threatening illness are faced with many losses. They mourn for their good health, their unmet life goals, and their anticipated separation from loved ones. It is essential to understand the meaning this illness holds for a particular woman in order to help with her psychological distress.

The woman with breast cancer experiences physiological, social, and psychological stress that leads to a spectrum of relatively mild depressive and anxious symptoms. Some women adapt without specific intervention, although many benefit from support groups. Other women develop more severe psychological symptoms that require specific treatment. For these patients, treatment can ameliorate morbidity and help to improve compliance with medical regimens. In some cases, timely psychiatric intervention can treat severe psychological dysfunction and even prevent suicide. Whether symptoms of depression and anxiety are themselves the reason for treatment, or whether the patient simply feels the pressure of her moods, psychotherapy can provide a profoundly meaningful opportunity for emotional growth.

The Psychological Reaction to the Diagnosis of Breast Cancer

The diagnosis of cancer is a personal catastrophe and many people react with the shock that they might to an earthquake, a fire, or a traumatic war event.[1] The response to either initial diagnosis, relapse, or treatment resembles the reaction to other losses.[2] A woman diagnosed with breast cancer may experience disbelief that the cancer could be real. Soon disbelief gives way to anger. The patient may blame her doctor (or health plan or hospital) for not making an earlier diagnosis, a parent for transmitting the genetic vulnerability, a spouse who has been inattentive or disappointing, or others. Blaming thoughts are often associated with guilt (or self-blame). A woman might unconsciously feel that she is punished for being an inadequate mother, or for having been disloyal to her mother who also had breast cancer, or for sexually inhibited attitudes, or for any of a number of other imagined transgressions. Finally, guilt and anger may give way to depressed feelings. The patient may feel irritable, sad, and tearful, or her mood may be flat and anhedonic. She may develop symptoms of sleeplessness, anorexia, and difficulty in concentrating. In some individuals, anxiety symp-

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toms such as worrying, foreboding, palpitations, or GI distress may predominate. Often these psychological manifestations are mild and require little more than reassurance and if indicated, a mild sedative-hypnotic or anxiolytic medication. In most patients, the intense preoccupation with the illness starts to abate after several weeks. Despite ongoing distress, many women have begun to realistically accept their illness and to actively participate in their treatment decisions.

Prevalence of Psychiatric Disturbance in Breast Cancer Patients

The psychological distress cancer patients experience varies with the particular medical situation, the patient's psychological resilience, and her available social support system. Half of all cancer patients respond adaptively to their illness. The other half, although for the most part without previous psychiatric history, go on to develop psychiatric symptoms for which evaluation and treatment may be warranted. Women with unresolved and intolerable depression or anxiety, or compromise in their daily functioning due to emotional causes, require further evaluation.

In one study, two thirds of the group with psychiatric diagnoses related to cancer were found to have adjustment disorders with depressed and anxious mood.[3] Other diagnoses included major depression (13%), organic mental disorders (8%), and previous long standing anxiety disorders and personality disorders (11%).[4] The adjustment disorders may respond to a short-term crisis intervention model of treatment.[5]

The primary clinician stands on the front line for detection of depression, anxiety, and suicidality in breast cancer patients. Members of the medical team can be instrumental in persuading the reluctant or naive patient to seek qualified psychiatric assessment and treatment. Unless these clinicians actively elicit symptoms, they may overlook major psychiatric problems in this complex population. In interviewing these patients, the system's review should include questions about what the patient is worrying about, whether her mood has changed, and how the illness has affected her work life and marriage. It is often helpful to note any personal or family psychiatric history because these may alert the clinician to important psychological vulnerabilities. In many instances, asking about psychological symptoms may reduce anxiety by allowing the patient to feel that she has permission to bring up these issues herself if they emerge in time.

Stress Factors in Breast Cancer Patients

For all breast cancer patients, the stresses of illness are compounded by the woman's personal circumstances. Concerns vary with age and stage of life. Single young women without children may focus on the prospect of childlessness. Younger mothers worry about the effects of their illness or death on their children. For a menopausal woman, the loss of a breast may intensify her feeling of loss of femininity and reproductive capacity. The older woman, particularly if she lives alone, may be especially frightened at the prospect of going through the ordeals ahead without anyone on whom to depend.

Different subgroups of patients with breast cancer may have their own characteristic sets of concerns. Women with more advanced breast cancer and more radical treatments may experience immediate emotional concerns about body mutilation, fear of dependency, and possible death. Since breast cancer may be familial, the clinician will also notice that women with a history of this illness in their mother or sisters may also have characteristic psychological problems. In these patients, feelings of guilt may be particularly striking. Guilt feelings may reflect the complexities of the relationships between mothers and daughters or between sisters.

Treatment for breast cancer may result in feelings of shame in personal and social situations. For many women, the alopecia resulting from chemotherapy is even more traumatic than the loss of the breast.[6] Patients worry that others will identify them as cancer patients. In addition, weight gain from chemotherapy commonly compounds the cancer patient's feeling of disfigurement. Coworkers might discriminate against them if they look ill and are unable to perform fully at work. Employers may ask for medical information to account for absences from work, raising questions about privacy. Many women cannot afford to take a substantial medical leave because of insurance limitations. In these women, financial hardships serve to intensify other fears. The group treatment room for chemotherapy, the alopecia, the employer's questions.... the patient cannot escape the feeling of shame, exposure, and anxiety about her loss of value as a worker, a mother. and a woman.

Many women are accustomed to providing the emotional support and comfort for their families. The diminution of this capacity can bring out intense feelings of guilt and unmask anger at her family members, who may not have learned to support her when she needs them.

Because breast cancer is such a prevalent women's health issue, this disease has been taken up by the media and presented in ubiquitous and sometimes dramatic articles and programs. In some cases it seems that the malady has been transposed from a medical to a political arena. Women and their legislators are concerned that the health-care system will not adequately care for them and have sought to mandate specific treatments and benefits. Under cultural influence, the anger felt by some breast cancer patients may seem to be directed at males and the male-dominated health-care system. The issues raised by these women in describing their feelings include a distrust of male physicians, particularly specialists who wield potent chemicals and recommend disfiguring surgical procedures. At times, breast cancer victims complain that male physicians are authoritarian and emotionally unavailable. For many women, breast cancer awareness has had the positive effect of empowering them to insist on an active role in their own treatment and recovery. They may also derive considerable strength from affiliation in groups. For other women, a culturally reinforced distrust of their care givers has hindered them from resolving their own internal difficulties. Psychotherapy may be necessary to help a woman to identify the sources of her own distress and reorient her thinking towards the issues that have greatest personal meaning for her.

Depression in the Breast Cancer Patient

Cancer patients may seem to have obvious, external reasons to feel depressed. On the other hand, clinical depression is not inevitable in the cancer patient. In fact, the majority of patients with breast cancer and other malignancies never have symptoms of major depression. However, any patient experiencing severe psychological symptoms such as extreme sadness, hopelessness and feelings of helplessness, loss of self-esteem, feelings of guilt and self-criticism, anhedonia, or suicidal wishes should be referred to a psychiatrist. The clinician must look especially for signs of psychological distress, because the usual somatic symptoms of depression may be masked by the presence of physical illness. As examples, fatigue, insomnia, anorexia, and weight loss can be caused by cancer, by its treatment, and by depression. The diagnosis of depression is further complicated by the frequent appearance of anxiety symptoms with somatization. The clinician may even be faced with complaints such as headache, memory loss, and even more focal, apparently neurological syndromes. These complaints must be explored as possible medical complications of cancer, at the same time as they are recognized as potential signs of depression.

After eliciting complaints of psychological symptoms of depression, the clinician should try to determine whether organic factors are contributing to the syndrome. Organic affective disorder manifests in the same way as "psychological" depression.[4] Organic causes of depression may include CNS tumor, hypercalcemia, thyroid dysfunction, vitamin B12 deficiency, viral infection, and of course, the side effects of pharmacological agents. Of the antineoplastic drugs, several are notoriously implicated in depression: corticosteroids, vinblastine, vincristine, procarbazine, asparaginase, tamoxifen, and interferons.[7] Even if a medical cause for depression is found, antidepressant medication may still be useful for control of symptoms.

Suicidality

The clinician who takes a psychiatric history should also ask about suicidality. Not all suicidality in cancer patients occurs in the context of depression. The most common cause of suicidality in these patients is unbearable pain.[8] In one study, 39% of those cancer patients who received a psychiatric diagnosis experienced significant pain. Only 19% of patients without a psychiatric diagnosis had significant pain. In many cases of depression due to pain, adequate analgesia is effective in resolving suicidality. Other patients, although not depressed, may find that guilt feelings surface under the stress of the cancer diagnosis. They sometimes seek relief from these feelings through self-punishment or suicide. Sometimes there is a mixture of guilt and anger that manifests as a suicide pact with a spouse or lover. Since the risk of suicide is increased twice over the general population,[9] it is important that every breast cancer patient have her suicide risk assessed. A careful history should include suicide history in the family or in close friends, recent loss of a loved one, previous suicidality, the presence of hopelessness, psychological guilt, and physical pain. If the woman is suicidal, she should have immediate psychiatric evaluation. Initiation of antidepressant treatment in the absence of psychiatric assessment is not appropriate.

Psychotherapy

It is not difficult to see how psychotherapy improves survival in the special case of the suicidal patient, but there is a more general effect of psychotherapy on survival time in breast and other cancers.[10] Psychotherapeutic treatment of women with metastatic disease has been shown to increase survival independently of suicidality.[11] The mechanism underlying such increased length of survival might include the influence of psychotherapy on health habits (such as exercise, smoking, nutrition), medical compliance, and treatment-induced changes in endocrine and immune function. Equally important is the role for psychotherapy in its capacity to improve the quality of life for cancer patients. Many women suffer from conflicts that preceded their cancer but emerged in the setting of life-threatening illness. There are a variety of ways the need for psychiatric care can manifest. All too frequently, psychiatric evaluation finally comes about when ongoing problems with medical staff reach a crisis point. A patient who seems to split the team, or who is often angry, or who repeatedly switches from one clinician to another, or who is needy and demanding beyond the constraints of the clinician's availability, should be referred for psychiatric assessment. Treatment can relieve the suffering behind a patient's irrational insistence on procedures, treatments, tests, and additional opinions that are not needed. Psychotherapy can assist a patient in establishing a trusting relationship with her care team. It can help her to develop more realistic expectations of her treatment and her providers.

In addition to the psychological symptoms of depression, the sensitive clinician may also recognize a woman's need for psychiatric care because of her conflict with her spouse, problems with her home situation, or her anxious concern about the effects of her illness on her family. There are several psychotherapeutic modalities from which to choose, including group therapy, brief crisis intervention, and open-ended individual psychotherapy. Any of these therapy options may be pursued in conjunction with pharmacotherapy in appropriate cases.

Psychotherapy Groups

Group treatment has been widely advocated for breast cancer patients.[12] Because of the spectrum of psychiatric disorders, it is best for all referred patients, even those without obvious major pathology, to be screened by the group leader who should be a psychiatrist or a highly trained and experienced mental health-care practitioner. If a patient is severely depressed or anxious, she may require individual treatment, and sometimes pharmacological treatment prior to joining a group. Time-limited groups may be effective for the recently diagnosed patient. Patients with severe, recurrent, or metastatic disease may have better experiences in open-ended groups.

There are many issues that arise in groups of breast cancer patients. Career-oriented women may feel a need to reorder priorities in favor of personal relationships, particularly with their children. A person who has lived abstemiously, or in unsatisfying relationships, may wish to free herself so that she can derive greater enjoyment from her life. Another frequent topic is the disfigurement of weight gain, loss of hair, and breast surgery and reconstruction . Women report feeling physically damaged and emotionally scarred by these experiences. In the acceptance and shared experience of the group, a woman may begin to feel more acceptable, lovable, and normal. The group can often provide specific support and advice about difficult issues such as disclosure of illness to children. Shared stories of how others handled these events and how their children reacted may help to make a patient feel less personally responsible for causing the suffering of her children.

Much has been written about the stigma of cancer in general and breast cancer in particular. Often this perceived external stigma originates in a patient's own intolerance of her feelings and difficulty in expressing herself. In literature and the media, the curtailment of ambition, suppression of anger, and the frustration of childlessness or thwarted sexual desire have been linked to malignant breast disease.[13] Sometimes the notion that a constricted emotional style causes cancer can lead a woman to feel personally responsible for bringing this disease upon herself. Group work may be helpful in relieving this feeling of stigma by debunking these myths. In a group, a patient with strong feelings along these lines may feel that she should not burden the other participants. The group leader's supportive attitude might help the woman to reach out and accept help from others. Enlisting the concern and interest of other patients may make it possible for the woman to begin to tolerate her own painful feelings about the possibility of being unable to raise her children, about leaning on an elderly parent, or about underachieving at work. Sometimes a woman with breast cancer finds that there is no easy answer to her problems; in this situation, the group's acknowledgment of loss and uncertainty serves to facilitate the mourning process.

Women with breast cancer are confronted by our society's reticence to speak plainly about sexuality and body parts perceived as being sexual. These women may fight feelings of shame connected to the attention that is drawn to an eroticized body part. Women struggle with feelings that they have lost their femininity, that they have lost their attractiveness to men, and that they can no longer engage in sexual relationships. A major theme in group work with breast cancer patients may be overcoming shame and empowering the woman with these issues to take a more positive role in her own treatment.

Certain caveats apply to group work with breast cancer patients. This modality works best if members are initially screened and assigned to groups with members at a similar stage of illness. The issues facing women at earlier and more advanced stages of cancer are quite different. The ordeal of a newly diagnosed breast cancer patient may be worsened by a group with a focus on terminal disease. Conversely, the problems of a relatively well, newly diagnosed woman may seem unimportant in the eyes of a woman who is severely ill. All groups of breast cancer patients should be facilitated by experienced clinicians. Clinicians familiar with this patient population have frequently observed that groups facilitated by nonprofessionals may exacerbate patient anxiety in some cases.

Psychotherapy—Individual

Brief, crisis-oriented psychotherapy aims to improve the patient's self-esteem and sense of control, thereby ameliorating specific symptoms. Such treatment might be indicated at a time of crisis such as at diagnosis or at the time of recurrence. As the patient considers her recent losses and is helped to envision a future for herself in which she has a chronic illness, her hopefulness may return. Although she may not be able to control her disease progression, she might achieve a sense of psychological control as she sees that she can manage her feelings, her medical care, and the way she chooses to live her life. Education about symptoms and treatments and cognitive techniques that address exaggerated fears may also help to restore the patient's equilibrium.[8] Many women need or prefer the privacy of individual therapy. Exposing their feelings in a group setting may be too complicated, intense, or intimate. As a patient evaluates what the illness means to her, she often discovers that her distress is embedded in distant life events and in long-standing personality traits. A woman's recent difficulty may arouse conflicts concerning self-esteem and dependency arising from her early life. The guilt experienced towards a spouse or child may also originate in childhood feelings. The issues stirred up by breast cancer often cannot be addressed solely by medications or support. What proves essential to the resolution of anxiety symptoms and depression is the understanding of how the patient avoids various feelings in displacements, denials, enactments, and symptoms. In the relationship with a therapist who listens, values feelings, makes connections, and does not judge, the patient can begin to rework pieces of her life in ways previously inaccessible to her. Whether the work revolves around loss and dying, or adjusting to deforming treatments, or allowing herself to accept treatment, or absolving herself from long-standing guilty and judgmental attitudes, the woman with breast cancer can use psychotherapy as an opportunity to enhance the meaningfulness of her life.

Conclusion

Breast cancer is associated with many types of psychological problems. Although many women appear to do well without specific mental health intervention, treatment is invaluable in a large percentage. The clinical team working with women afflicted with malignant breast disease must be alert to the variety and clinical features of depression and anxiety in this population. In these cases, timely referral and skilled psychiatric treatment are essential. Psychiatric care of women with breast cancer improves their quality of life and in many cases, improves the outcome of their cancer therapy.

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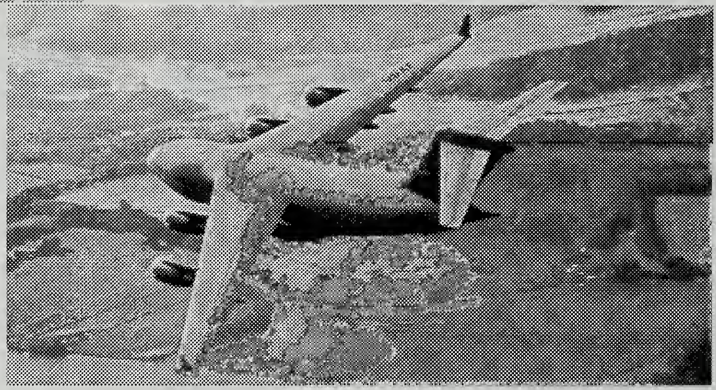

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High-Dose Chemotherapy for the Treatment of High-Risk and Advanced Breast Cancer

BARBARA BURTNESS, M.D.

A Review for *Connecticut Medicine*

Introduction

INTENSIFICATION of chemotherapy dosing in the treatment of breast cancer has been extensively studied. The correlation of dose intensity with better outcome was initially shown by retrospective analyses.[1,2] Randomized trials compared high-dose to standard- dose therapy in metastatic breast cancer in the era before hematologic support. In those studies the dose was intensified three fold or less; not equal to the increases in dose which had been demonstrated in *in vitro* models to lead to reversal of drug resistance.[3] Several early trials demonstrated an advantage for increased dose or dose intensity. Recently, the development of autologous stem cell transplantation and the availability of colony stimulating factors permitted much greater dose escalations.[4–7] These high-dose regimens are the subject of this review.

Chemotherapeutic Agents

The agents most suitable for extreme dose intensification are those with a dose-response curve that continues even at the highest doses. For such drugs, hematologic toxicity is dose limiting. Most of these agents are alkylating agents.[8–13] Escalation of dose for agents from other classes to levels requiring hematopoietic support has also been undertaken. For example, mitoxantrone has been incorporated into some combination high-dose regimens,[14] and paclitaxel dose has been escalated to 825mg/m2 with stem cell support in a phase I study.[15]

Supportive Technology

The use of recombinant growth factors allows significant dose intensification even without stem cell support. Hudis et al have reported a dose-dense sequence of doxorubicin, paclitaxel, and cyclophosphamide around the clock, supported by filgrastim.[16] The National Surgical Adjuvant Breast and Bowel Project (NSABP) has tested a four-fold increase in cyclophosphamide dose in the adjuvant setting.[17]

When needed, stem cells are preferable to autologous marrow because they can be collected with less morbidity, and they can be rapidly quantified so that collection can be repeated until a target number of cells is collected. Sufficient cells can be collected and reinfused to reduce the risk of nonengraftment and to support multiple cycles of high-dose chemotherapy. Also, sufficient cells can be collected to permit manipulations such as purging or positive selection. Recovery from neutropenia is rapid enough with these regimens that repeat doses of chemotherapy can be given in the same time frame as cycled conventional chemotherapy. Reinfusion of at least 2.5 x 10^6 CD34+ cells/kg reliably leads to reengraftment in <12 days.[18] The recombinant growth factors dramatically increase the number of progenitor cells in the circulation.[19] Further, rebound leukocytosis after myelosuppressive chemotherapy also stimulates release of CD34+ cells and permits stem cell harvesting.[20] Breast cancer-specific regimens which mobilize stem cells when given with recombinant growth factor include paclitaxel at standard doses and epirubicin in combination with paclitaxel.[21,22] Progenitor cells will also be mobilized by escalated but not myeloablative doses of alkylating agents with growth factor support. This contributes to the ability to increase overall dose intensity in these regimens.[23] The extent of

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chemotherapy and radiotherapy to which the patient was previously exposed are the most powerful predictors of the success of mobilization. Younger age is also a favorable predictor.[24,25]

The usual schedule of reinfusion of stem cells calls for reinfusion of a single dose after clearance of the chemotherapeutic agents. Growth-factor injections begin on day one. A randomized trial of filgrastim doses of 5, 10, or 16 μg/kg, begun on day one demonstrated no difference in time to neutrophil engraftment among the groups; however, a tendency toward more rapid platelet engraftment was seen in the 5 μg group. This group also had the lowest cost for growth factor.[26]

SinglesCycle High-Dose Chemotherapy

Because of the unproven nature and high-risk of the treatment in the earliest studies of high-dose chemotherapy patients with breast cancer were considered candidates for enrollment only if they had an exceedingly poor prognosis. Mortality rates initially approached 20%.[27] Despite the high mortality and adverse patient selection, responses were demonstrated in patients with refractory disease and a small number of these patients became long-term survivors. For the majority of patients, responses were of short duration.[28] Subsequent studies hoped to improve outcomes by selecting patients with disease responsive to chemotherapy. These patients were chosen because earlier studies indicated that such patients were most likely to achieve long durations of progression-free survival (PFS). The recent report from the Autologous Blood and Marrow Transplant Registry compares outcomes in women with metastatic disease treated for refractory or treatment-responsive disease.[29] The three-year progression-free survival is 7% for patients with no response to conventional chemotherapy, 13% for those who achieved a partial response, and 32% for those who underwent high-dose chemotherapy after they had entered a complete response. These data may be confounded because different treatments were offered to different groups of patients. At a single center, patients were offered high-dose chemotherapy only for refractory disease before January 1990, and only for chemotherapy responsive disease after January 1990. The progression-free survival was 12.2 months for the first group and 23.2 months for the second, and overall survival 20.5 for the first and 39.7 for the second.[30] Although these data are not from randomized, controlled trials, they imply that longer survivals can be expected when transplant is offered to patients with chemotherapy-responsive disease. Among previously untreated patients, the importance of a response to induction chemotherapy may be overstated, as primary drug resistance is not common in this setting.

The use of stem cell rather than bone marrow transplantation has led to shorter durations of neutrophil nadirs; carmustine is used less frequently, reducing the incidence of pulmonary toxicity. Patient selection is more appropriate; and experience has led to better management of toxicities. The expected mortality of this approach is now less than 5%.[29]

Tandem Transplants

Two cycles of high-dose chemotherapy have been found to improve outcome in the treatment of neuroblastoma.[31] The feasibility of tandem cycles of high-dose chemotherapy in metastatic breast cancer was demonstrated by Ayash et al.[32] In a small study of two cycles of high-dose chemotherapy one third of the patients who achieved a complete response achieved that complete response to the second cycle. The durability of responses was poor and the contribution of the second cycle to survival was not established.[33] Bitran et al treated 27 patients with responsive disease with cyclophosphamide/thiotepa and progenitor cell support followed within 180 days by melphalan plus progenitor cell support. They achieved a complete response rate of 56%, parial response rate in 11% of patients, and freedom from progression at 24 months in 56%.[34] Thus, multicycle high-dose therapy is associated with higher complete response rates than single-cycle high-dose therapy, but experience has been variable with regard to the toxicity and the durability of response.

Historical Comparisons

At the M.D. Anderson Cancer Center, 590 women who were treated for metastatic breast cancer with doxorubicin-based chemotherapy during the years 1973 to 1985 would have been offered high-dose chemotherapy if they had presented to the same institution after 1985. These patients were <60 years of age, had evidence of a response to standard-dose chemotherapy, excellent performance status, and adequate cardiac, marrow, and hepatic function. The five- year survival for this group was 19% and the 10-year survival rate was 5%.[35] Although these patients did not enjoy disease-free survival, this experience demonstrates that a small minority of patients with chemotherapy-responsive disease may be expected to have prolonged survival.

Randomized Studies in Metastatic Disease

Several cooperative group trials of standard-dose *vs* high-dose chemotherapy with metastic breast cancer using progenitor cell support, are currently underway. These trials may not be definitive, as they are being done with single cycles of highly toxic regimens. Accrual to these random assignment trials has been slow. The sole completed and reported randomized study of high-dose chemotherapy with stem cell support *vs* conventionally-dosed chemotherapy as initial therapy for metastatic disease was conducted by Bezwoda and colleagues in South Africa.[36] This small study showed a striking advantage for high-dose over conventionally dosed chemotherapy, with complete response rates of 51% and 4%; overall response rates of 95% and 53%; and median survivals of 90 and 45 weeks. The study has not been accepted as definitive because of flaws in the design. The conventionally dosed regimen was a combination of cyclophosphamide, mitoxantrone, and vincristine (CMV); this regimen had been previously reported by the same investigators to have high activity. In the control arm of the randomized trial the partial response rate was 51%, and the complete response rate 4%. Combination regimens popular in the United States, such as CAF, are associated with partial response rates of 65% and complete response rates of 10%, and are inferior to the response proportion reported for the investigational arm of Bezwoda's study. The median survival of the control arm was much lower than commonly reported for chemotherapy-treated breast cancer. Patients were given a predetermined number of chemotherapy cycles and if there was a partial response, they were placed on tamoxifen. Tamoxifen was given to more patients in the transplant arm because more of them achieved a partial response. Despite these inadequacies, the complete response rate in the the transplant arm is quite high and the differences in response rate and survival are much greater than those seen in comparisons of standard regimens of differing efficacy. Neither of these endpoints would result from the biases noted.

A randomized study of immediate *vs* delayed high-dose chemotherapy in 98 patients who attained a complete response with standard chemotherapy has been reported in abstract form.[37] This study was performed in a subset of patients with responsive biology who were likely to respond to treatment that was delayed until relapse. It is known that among patients treated with standard chemotherapy, reinduction at relapse is more likely to be effective if there was a complete response to induction therapy than if the best response was stable disease or a partial response.[38] The difference in the timing of high-dose chemotherapy was only a few months, indicating a short duration of the initial complete response (CR). For that reason the difference in tumor burden between patients in the two groups was small. Transplant-related mortality was high in both arms, diminishing the benefit of transplant. Norton has presented an analysis of this study showing that impact of transplant, expressed as survival from transplant, was the same in both groups, and that the advantage of delayed transplant came about because this time was added to the period between complete response and relapse in the delayed arm.[39] A small proportion of patients also had prolonged relapse-free survival in the delayed arm, further contributing to the longer survival in the delayed transplant arm.

High-Dose Chemotherapy in the Adjuvant Setting

Nontransplant studies of dose intensification in the adjuvant setting have established a role for increased dose intensity. In a randomized study the CALGB compared three dose intensities of (CAF) chemotherapy.[40] This was not a true test of high dose therapy because the dose intensity was increased only two fold, but the study clearly established that lower dose therapy was less effective. The dose intense around the clock regimen has attracted attention because of a low relapse rate of 17% at 36 months of median follow-up in a group of patients at high risk for relapse based on a median number of greater than eight involved nodes.[16] The potential advantages of the regimen on theoretic grounds include the use of multiple cycles. Rapid recycling increases dose intensity and is favored if tumor behavior is accurately predicted by Gompertzian kinetics.[41] Because no cells which were shielded from chemotherapy are reinfused, there is no risk of reintroducing cancer cells with stem cell reinfusion, which is also likely to be advantageous.

Peters treated a group of patients with 10 involved nodes, with six cycles of standard chemotherapy followed by one of HDC. This resulted in a projected five-year disease-free survival of 72%.[42,43] Several cooperative groups are conducting randomized trials of high-dose chemotherapy *vs* conventional adjuvant therapy. It has been important in the design of these trials to choose high-dose chemotherapy regimens with acceptably low toxicity and control arms that will be recognized as valid. None of these trials have shown a significant difference to date. The current intergroup trial for patients with four to nine involved lymph nodes compares the around the clock regimen to single-cycle high-dose chemotherapy with stem cell transplantation.

Other Outcomes

Economic endpoints can be determined using costs or charges to the payer compared with other expensive medical procedures which are more widely accepted, such as dialysis or coronary artery bypass grafting; high-dose chemotherapy has similar cost-effectiveness.[44] Quality-of-life analyses reveal that 33% of patients report depressive symptoms post-transplant, but despite this, quality-of-life and mood measures compare favorably with patients receiving conventional therapy for metastatic breast cancer.[45,46]

Complications of High-Dose Chemotherapy

Neutropenic complications, transfusion requirements, and days of hospitalization are increased with high-dose chemotherapy relative to standard-dose therapy. High-dose chemotherapy with progenitor cell support is currently associated with a 3% risk of treatment-related mortality.[29] The majority of these deaths occur during the neutrophil nadir and are related to bacterial infection. The use of prophylactic oral antibiotics, prompt, empiric institution of broad-spectrum intravenous antibiotic therapy for febrile neutropenia, and short duration of the neutrophil nadir are responsible for the drop in mortality to this low level. Fungal super-infection has decreased in importance with the use of prophylactic oral fluconazole.[47] Recently transplanted patients may need more aggressive management of infections and should be vaccinated against pneumococcus and influenza.

Pulmonary toxicity, acute or delayed, is another leading cause of morbidity and mortality from high-dose chemotherapy given for breast cancer. Interstitial pneumonitis has complicated both combination and sequential single agent regimens.[48] Risk factors include the use of busulfan, use of carmustine, chest wall radiation, and possibily the interval between cycles for multicycle regimens.[49] A fatal thrombotic microangiopathy may develop post-transplant.[50] Hepatic toxicity occurs in about 5% of patients, but fatal venoocclusive disease (VOD), a significant problem among patients receiving allogeneic transplants, is rare in patients receiving an autologous stem cell transplant for breast cancer.[51]

The central nervous system toxicity seen with high dose chemotherapy is a subacute encephalopathy presenting with confusion, lethargy or seizures, and multifocal, predominantly white matter lesions; this is usually self-limited.[52] Autologous graft *vs* host disease (GVHD) is a recently described phenomenon. The symptoms may include skin rash or fever at the time of white-cell count recovery. Other manifestations of this syndrome are refractoriness to platelet transfusion, diarrhea, diffuse alveolar hemorrhage, autoimmune thrombocytopenia, and hemolytic anemia.[53] At a median follow-up of 34 months, 2% of patients were diagnosed with a second malignancy, including acute myeloid leukemia and myelodysplasia.[54] The ultimate risk of second malignancy is not yet known.

Stem Cell Product Contamination

Circulating epithelial cells can be identified in stem cell collections by immunohistochemical methods, and clonogenic studies have confirmed that some of these cells are viable.[55] Because of the risk that reintroduction of cancer cells at the time of marrow or stem cell rescue could hasten relapse, purification techniques have been studied for their safety and ability to reduce contamination. Replication defective adenoviral vectors can be transduced into breast cancer cells to introduce the HSV-thymidilate kinase gene, rendering the cells sensitive to the cytocidal effects of gancyclovir, and resulting in a six-log cell kill after exposure to gancyclovir.[56] Tumor cell contamination of the marrow or of reinfused cells appears to be a predictor of relapse: among 26 patients with advanced breast cancer, patients who had tumor cells detected in the pheresis product exhibited a tendency to worse survival (17 months *vs* 25+ months).[57] Similarly, detection by PCR of CK-19 in bone marrow confers a poor prognosis on patients receiving autologous marrow support.

Problem of Residual Disease

Residual disease is the most important prognostic factor for relapse after high-dose chemotherapy: a complete response carries a favorable prognosis and bone marrow or pheresis contamination an unfavorable one.[58] Intentional induction of autologous graft *vs* host disease by cyclosporine withdrawal is under study as a means of eradicating residual microscopic disease.

Role of Consolidation

Relapses frequently occur in those sites of disease which were bulkiest at diagnosis and resection of gross residual disease or radiation of such areas are included in many high-dose chemotherapy programs. The hematologic toxicity of radiotherapy post-transplant has been acceptable, although more severe, and treatment interruptions are more common.[59] Sixty-seven percent achieve continuous local control of such consolidated sites, especially in sites other than the chest wall.[60] In patients who do not receive consolidative radiotherapy, 64% fail first only in sites of previous disease involvement, compared with 22% who receive consolidative radiotherapy. This does not impact overall survival, except in patients who have fewer than three sites of involvement by metastatic disease.[61] Maintenance hormonal therapy is frequently used in patients expressing hormone receptors who were not absolutely hormone refractory prior to transplant, and the striking difference seen in time to recurrence between the two arms of the Bezwoda study, in which patients randomized to transplant were disproportionately likely to receive hormonal therapy, may indicate that this plays a role in survival.[36]

Prognostic Factors for Relapse

Predictors of prolonged disease-free survival include a single metastatic site, CR to induction therapy, prolonged interval from primary diagnosis to first metastases, ER (–), and older age. In multivariate analysis, single metastatic site and CR to induction therapy were statistically significant.[58] In a group of patients offered tandem transplant for stable or chemotherapy-responsive disease, multivariate analysis identified liver and soft-tissue metastases and prior adjuvant therapy as significant adverse prognostic factors.

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MORBIDITY AND MORTALITY WEEKLY REPORT

Use of Cervical and Breast Cancer Screening Among Women With and Without Functional Limitations—United States, 1994–1995

THE national health objectives for 2000 include increasing to at least 85% the proportion of all women aged ≥18 years who have received a Papanicolaou test within the preceding three years and increasing to at least 80% the proportion of women aged ≥40 years who have ever had a mammogram.[1] However, national data on breast and cervical cancer screening specifically for women with disabilities is limited. During 1994-1995, CDC, 12 other federal agencies, and one foundation sponsored a disability survey as a special supplement to the National Health Interview Survey (NHIS). In 1994, questions on breast and cervical cancer screening were included in the NHIS Health Promotion/Disease Prevention Year 2000 Objectives Supplement. This report provides the findings of an analysis of these linked data, which indicate that women with functional limitations (FLs) were less likely than women without FLs to have had a Pap test within the previous three years, and women aged ≥65 years with three or more FLs were less likely to have ever had a mammogram compared with similarly aged women with no limitations.

The combination of the 1994 disability survey and the Health Promotion/Disease Prevention supplement provided a sample size of 11,399 women aged ≥18 years. Participants in the 1994 Health Promotion/Disease Prevention supplement were asked whether their last Pap test was within the previous year, between one and three years ago, or less than three years ago, and women aged ≥30 years were asked how long it had been since they had had a mammogram. Disability was defined as having one or more FLs (unable to do any of the following: lift 10 pounds; walk up 10 steps without resting; walk a quarter of a mile; stand for approximately 20 minutes; bend down from a standing position; reach up over the head or reach out; use fingers to grasp or handle something; and hold a pen or pencil). SUDAAN®* was used to compute 95% confidence intervals (CIs). In the tables, nonresponses to the Pap and mammogram examination questions were included in the denominator for calculating the percentages. If they had not been included in the denominator, the percentages of those screened would have been higher.

In 1994, approximately 16% of women aged ≥18 years surveyed had at least one FL (n=2,119). The prevalence of having at least one FL increased with age, from 6.4% of women aged 18 to 44 years to 39.5% of women aged ≥65 years.

Approximately 91% of women aged ≥18 years surveyed had received at least one Pap test. Among women with FLs, women aged ≥65 years were significantly less likely to have ever had a Pap test than women aged 18 to 44 years; there was no difference by age among women with no FLs (Table 1). Women with FLs were as likely as women without FLs to have ever had a Pap test (one to two FLs, 92.3%; three or more FLs, 90.0%; and none, 90.8%). Within the preceding three years, an estimated 76.1%, 64.8%, and 60.6% of women aged ≥18 years with no FLs, with one or two FLs, and with three or more FLs, respectively, had received a Pap test (Table 1). Women aged ≥65 years were significantly less likely to have received Pap tests within the preceding three years than were younger women. Women with FLs were less likely than women without FLs to have received a recent Pap test (one to two FLs, 64.8%; three or more FLs, 60.6%; and none, 76.1%).

Among women aged ≥40 years, 76.2% had had at least one mammogram. An estimated 77.5%, 73.9%, and 70.9% of women aged ≥40 years with no FLs, with one or two FLs, and with three or more FLs, respectively, had ever had a mammogram (Table 2). Among women with no FLs and among women with three or more FLs, those aged ≥65 years were significantly less likely to have had a mammogram (none, 73.3% [95% CI=70.7%–75.9%]; and three or more, 64.7% [95% CI=60.4%-69.0%]) than women aged

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Table 1.—Percentage of women who had had a Papanicolaou test, by age and number of functional limitations (FLs)—United States, 1994

Age group (yrs)/ No. of FLs	%	Ever (95% CI*)	%	≤3 years (95% CI)	NR†
18–44					
None	89.8	(88.7%–90.9%)	80.2	(78.8%–81.6%)	3.3
1–2	95.9	(92.8%–99.0%)	77.8	(71.4%–84.2%)	2.7
≥3	95.8	(91.0%–100%)	79.4	(72.0%–86.8%)	2.6
45–64					
None	94.6	(93.5%–95.7%)	75.7	(73.5%–77.9%)	3.4
1–2	96.8	(94.7%–98.9%)	70.2	(63.3%–77.1%)	2.2
≥3	94.8	(92.0%–97.6%)	74.4	(68.7%–80.1%)	2.0
≥65					
None	87.9	(86.0%–89.8%)	58.1	(55.4%–60.8%)	4.8
1–2	86.5	(82.7%–90.3%)	51.6	(46.4%–56.8%)	4.2
≥3	85.1	(81.7%–88.5%)	46.0	(41.5%–50.5%)	7.1
≥18					
None	90.8	(90.1%–91.5%)	76.1	(74.9%–77.3%)	3.5
1–2	92.3	(90.3%–94.3%)	64.8	(61.4%–68.2%)	3.2
≥3	90.0	(87.8%–92.2%)	60.6	(57.5%–63.7%)	4.7

*Confidence interval.

†Nonresponse rate.

50 to 64 years (none, 80.6% [95% CI=78.0%–83.2%]; and three or more, 80.9% [95% CI=75.2%–86.6%]) and were significantly less likely to have had a mammogram within the previous two years. For women with one or two FLs, there was no statistically significant difference by age in ever having had a mammogram and in having a recent mammogram. Among women aged ≥65 years, women with three or more FLs were less likely to have ever had a mammogram and were less likely to have recent mammograms than women with no limitations. The differences in having ever had and in having had a recent mammogram by FL status for the younger age groups were not statistically significant.

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Editorial Note: The findings in this report indicate that although the percentages of women who had had Pap tests and mammograms are below the national health objectives, the gaps are larger for women with FLs than for other women. Older age and degree of FL combine to increase the probability of not having had recommended screenings.

Several barriers reduce the likelihood that women with physical limitations will receive pelvic examinations. Women with physical disabilities have been refused care by a physician because of their disability.[2] Clinicians may forego Pap tests altogether under the assumption that the severity of the woman's disability precludes sexual activity, putting her at little risk for cervical cancer. They may end an examination early if symptoms such as pain, spasticity, or autonomic hyperreflexia become problematic. The reason most frequently cited by women with physical disabilities for not going for pelvic examinations was difficulty mounting standard examination tables.[3] Adjustable-height examination tables are available to accommodate most physical limitations; however, few medical offices use them.[4]

The lack of statistical significance in the differences in having had mammograms between younger and middle-aged women with FLs may be due to relatively small sample sizes for women in these categories. Almost all mobile mammography trailers are inaccessible to women who use wheelchairs and are very difficult to access by women who have an impaired ability to ambulate. The evidence that younger and middle-aged women with disabilities are receiving mammograms despite these barriers may be explained in part by their high rate of use

Table 2.— Percentage of women who had had a mammogram, by age and number of functional limitations (FLs)—United States, 1994

Age group (yrs)/ No. of FLs	%	Ever (95% CI*)	%	≤2 years (95% CI)	NR[†]
40–49					
None	77.6	(75.1%–80.1%)	60.6	(58.0%–43.2%)	2.4
1–2	75.7	(67.3%–84.1%)	53.3	(44.2%–62.4%)	2.9
≥3	77.2	(68.8%–85.6%)	58.5	(48.1%–68.9%)	2.5
50–64					
None	80.6	(78.0%–83.2%)	64.8	(62.1%–67.5%)	4.1
1–2	79.7	(73.3%–86.1 %)	60.9	(53.6%–48.3%)	2.1
≥3	80.9	(75.2%–86.6%)	60.9	(53.7%–68.1%)	3.3
≥65					
None	73.3	(70.7%–75.9%)	56.5	(53.8%–59.2%)	3.6
1–2	70.1	(65.0%–75.2%)	52.0	(47.0%–57.0%)	3.5
≥3	64.7	(60.4%–69.0%)	42.5	(37.7%–47.3%)	6.5
≥40					
None	77 5	(75.9%–79.1%)	61.0	(59.4%–62.6%)	3.3
1–2	73.9	(70.3%–77.5%)	54.8	(50.9%–58.7%)	3.0
≥3	70.9	(67.7%–74.1%)	49.8	(46.1%–53.5%)	5.0

*Confidence interval.

†Nonresponse rate.

of medical services overall,[2–4] implying a greater likelihood of receiving mammograms as part of an array of services.

The findings in this report are subject to at least four limitations. First, the sample includes only noninstitutionalized persons; thus, nursing home residents, who have high levels of FLs, are not represented. Second, the estimates have sampling errors that are relatively large for estimates based on small populations, such as persons with three or more FLs.[2,3] Third, a few of the reported FLs (<1%) were not associated with chronic conditions and may have been temporary. Finally, proxy responses were allowed for questions on FL, and proxy respondents are known to report limitations differently from self-respondents.[5]

Future research should examine barriers to these preventive services for women with FLs, including physical and social barriers in the health-care delivery system. Research on screening behaviors of women routinely should include measures of disability. Providers of screening services should be informed about the health-care needs of women with disabilities, offered techniques for conducting pelvic examinations and mammograms that accommodate such women, and provided information on managing disability-related symptoms that may interfere with examinations.

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Commentaries

Integrative Medicine: An Old Concept with New Meaning

The medical profession continues to undergo significant changes as we approach the new millennium. A rapidly growing development has been the emergence of complementary / alternative medicine (CAM). As reported by Eisenberg et al in 1993, one in three Americans surveyed in 1990 used "unconventional" (CAM) therapies.[1] Such therapies as diverse as acupuncture, chiropractic, herbal medicine, and massage are defined as medical interventions that are neither widely taught at U.S. medical schools nor generally available at U.S. hospitals.

The public, our patients, are seeking out and exploring these modes of healing. They are reading and gleaning information from sources that may or may not be sound. In most cases, patients are paying out-of-pocket. Perhaps they ask our opinion, however, few of us have the necessary education, knowledge, or reliable references to guide us. Overall the data are lacking. We are left feeling unsatisfied, often holding to our important tenet "primum non nocere" and dismissing the therapy or pleading ignorance. In addition, we often do not even ask our patients if they use CAM therapies.[2]

What is our experience here in Connecticut? How are physicians thinking about and responding to these changes? In order to address these questions, a pilot study was conducted in the summer of 1997 which documented the current definition, knowledge, and utilization of unconventional therapies by primary-care physicians.[3] Ten general internists and 10 family physicians who serve as community preceptors at the University of Connecticut School of Medicine were asked to: 1) define unconventional medicine, 2) rate a list of CAM therapies in terms of their perceived degree of conventionality, and 3) indicate which of the therapies their patients use, which they have recommended, and which they have tried themselves.

These physicians' definitions of unconventional medicine concurred with Eisenberg's conceptual definition as therapies not taught in medical schools or not generally available in mainstream medicine. However, when it came to practical application, physicians rated therapies that had previously been categorized as unconventional, such as support groups, biofeedback, and hypnosis, to be conventional. Furthermore, no therapy was unanimously agreed upon as being unconventional. As expected, physicians were more apt to recommend therapies that they considered to be more conventional. However, their recommendation of therapies was not dependent on their past personal experience with CAM. In fact, some therapies recommended by all (support groups) or the majority (acupuncture), had not been tried by any of them. Most physicians rated therapies such as folk remedies, herbal medicine, spiritual healing, and more conventional modalities such as physical therapy and counseling as having been used by patients. An interesting finding was that family physicians reported recommending significantly more CAM therapies than general internists. The study, however, neither took into account actual numbers of patients using various therapies, nor did it directly ask patients what CAM they use. Overall, these findings may suggest an apparent transition or integration of CAM into mainstream medicine in this primary-care sample.

Given the increasing interest in CAM across the United States as well as Connecticut, how do we appropriately evaluate these therapies? Where do physicians turn for information to share with their patients? Help is on the horizon. In 1992 the National Institutes of Health established the Office of Alternative Medicine (OAM) with two million dollars and the mission to facilitate research and evaluation of unconventional medical practices and disseminate this information to the public.[4] By 1997 total funded research from OAM surpassed six million and included the following institutions: Duke University, trial of hypericum (St. John's wort) for the treatment of depression; Johns Hopkins University, mechanisms of food hypersensitivity in atopic dermatitis; Stanford University, alternative medicine for preventing frailty in elders; Palmer College of Chiropractic, chiropractic research; University of Arizona, acupuncture in the treatment of depression; Columbia University, alternative medicine in women's health. The Office of Alternative Medicine also supports a field group in alternative medicine within the Cochrane Collaboration, an excellent international organization that aims to help people make well-informed decisions about health care.[5] Through the Cochrane Library, the collaboration prepares, maintains, and ensures the accessibility of systematic reviews of the effects of health-care interventions, both conventional and CAM.[6]

As we move through these exciting times of growth and discovery, one feels we will best serve our patients by keeping an open mind. The world's varied healing practices and our collective experiences with them may have much to offer. Just as any good physician integrates the experience, skill, and knowledge of his or her field with those of colleagues toward the betterment of patient care, so may we embrace the growing field of CAM. For as experience, knowledge, and wisdom grow, so too may we move from the terminology of alternative, to complementary, to the new, more appropriate term and concept: Integrative Medicine—an approach to patient care we have always striven towards.

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Braintrust

Physicians are struggling to come to terms with the new health-care environment: HMOs, dwindling incomes, greater work loads, less respect, greater patient expectations. I don't feel as sorry for us and our plight as I do for the plight of our patients and those without access to health care. I don't know any physicians who are not able to pay their mortgages or find work, or have access to medical care, although I know many who fear that that day will come. But as physicians I believe it is within our power to chart a new direction for the future of health care in particular, and the country in general.

We can redirect how the health-care debate is framed. The debate now is about how to pay for health care. It is simply a matter of economics. There is a limited amount of resources and a great demand. It's only responsible to restrict access, restrict testing, and restrict treatment so that the greater good can be served. Or is it? Because as physicians we are abdicating our role of fully caring for our patients individually so that we can serve a greater societal role. I think it's a mistake. We will lose, if we haven't already, our patient's trust, their faith in us and in our relationship with them. We are there to serve the bottom lines of insurance companies as much if not more than them.

The health-care debate should be about defining what it means to care for another person. We know how hard it is to care, to take care of our patients. Everyday that I practice I reach the boundaries of my compassion, my ability to care. I say to myself that these are my limits and that it's not good for me to go any further. But I don't feel good about it. Each day I have a list of patients and a restricted amount of time to deal with their problems. And for most of them I'm just able to skim the surface. I am deluged, as no doubt you are, with medical and nonmedical problems that reflect emotional dysfunction, abuse, and neglect: people who are depressed, panicked, somaticizing. We see the effects of stress in people who struggle day and night to provide for their families and don't have time to spend with them. We see people who play the accident-legal and worker's compensation games: all's fair in love and war, and for many people in this country, survival is a war. We are a rich nation but there is a poverty of care that money won't fix. The economy has worked for us in the past and can continue to do so, but as our tool, not our master. We simply have to devise new tools to be able to expand our ability to care as a society. Once the health-care debate is framed as what it means to care, it becomes obvious that the struggle should be how to expand our ability to care, not restrict it. This is America, and here we deal with the enrichment of the human spirit.

We seem to have lost that spirit in America, because we feel caught in this situation without a solution as we look to the next frontier, the global economy. But it is really not a frontier at all. It is our Master and we are its slaves. You and I are simply some of the better paid slaves. The Eeconomy is our Master because we believe that we can't do what is most meaningful and important to us unless we can pay money for it. We're being forced to measure the needs of our patients' with economic laws, and not by what they tell us. When such laws become so onerous that doctors are no longer treating the human condition but rather economic conditions, we must find a way to end this tyranny.

I have the unique privilege and perspective of the neurologist. And as a neurologist I believe that I can see America's next real frontier: the human brain. It is the most powerful, and awe-inspiring piece of machinery that has ever been. It is who you and I, our children, our neighbors and friends are, brains that animate our bodies. I confess that I am totally in awe of them. Unfortunately we don't know a whole lot about them, although as it turns out, science has recently developed tools to study how they work. The brain, is the organ of caring, and much of its ability to care comes directly as the result of the care it has received from other brains. We have yet to tap into its full capacity to care, for ourselves and each other. That is our charge, as doctors, as experts in care, we must show the way.

The brain is a way for us to believe in ourselves more than in the economy. But it will require not only new scientific but also personal skills: not being afraid to talk about what is on our minds, in our brains. We don't have the skill or trust to talk freely: there is a separation between our public and private selves. We are more aware of the foibles of our leaders, but the truth is that we don't trust politicians, because we can't trust them anymore than we trust each other, and we don't know each other very well. I imagine that Bill Clinton is just a 14-year-old whose sexual fantasies were never discussed. Who should he have talked too? And where was the medical community when Jocyln Elders was fired for advocating teaching about masturbation? Silent. We do not have the ability to deal with the real problems facing people because people don't usually talk publicly about their personal problems. Our politicians don't unless what happened to Bill Clinton happens. And if the president of the United States can't talk about what is really going on in his mind, with all of the might of that office, how can we talk about the real problems of people, let alone address them. I am not under any illusion that we have any such tools to undertake this task: openly and honestly express thoughts and feelings and constructively deal with them and care for them, as well as those others. We are not that different from Bill Clinton in the respect of not expressing much of what we think and feel, and being trapped by it, and wasting our resources under this burden.

Our generation has been lobotomized when it comes to imagining the kind of world in which the economy worked for the brain instead of vice versa. The brains of our children could imagine such a world if we asked them to. Instead of education being only about what children have to do to get a job, it could enlist them to devise the tools to be able to communicate what is on their minds, so that they can be in touch with, and learn how to trust and care for each other. Their brains could develop a more efficient system that could take into account the real needs of people, not just their economic ones.

To those who are cynical about central planning and the ability of medicine to affect people's lives I would say that any system is vulnerable to the extent that it does not contend with the real needs of people, that the founders of this country planned *centrally fairly decently*. Patients frequently appreciate as much or more the kindness and concern shown to them as the scientific expertise of a physician: the comfort that comes with being cared for means something. When economists talk about human nature, and what motivates people, or when historians talk about human nature's absolute corruption by absolute power they are missing the most important insights about human nature. How can they fully know it, when we don't know how a single neuron works, let alone how emotions are generated, memories stored, ideas created? The brain is truly the next frontier: it is confronting who we are and what we are really capable of, and we will need to know this before we can understand our true destiny.

Thus the message of physicians to the country could be that we need to care for each other better. That caring systems should be expanded as much as possible. That although economics will be a factor, we should use it as our tool rather than be solely subject to its dictates, and try other means of creating the kind of care that we need: through expansion and training of volunteers, the education of our children, to include not only a broader and deeper understanding of human physiology and pathology, but also a deeper understanding of themselves and each othen. That the future is in our brains, not only as scientific inquiry, not only as freer expression of its thoughts and feelings, but also as the genius that is in each one of them waiting to be unlocked. History could become the process by which humankind gains access to the power of the brain.

Kenneth A. Kaplove, M.D.
Waterbury

50 Years Ago

From *The Connecticut State Medical Journal*

January 1949

American College of Surgeons Elects

At the thirty-fourth Convocation of the American College of Surgeons, on Friday evening, October 22, the closing session of the Clinical Congress in Los Angeles, 943 fellowships and seven honorary fellowships were conferred—the largest class of initiates since 1914.

The new Fellows from Connecticut are:

J. Alfred Fabro	Torrington
Francis X. Foley	Bridgeport
Isaac L. Harshbarger	Bridgeport
Orvan W. Hess	New Haven
Martin I. Horn	Bridgeport
Charles E. Jacobson, Jr	Hartford
Leon Kaplan	Bridgeport
Kopland K. Markoff	Norwich
Joseph A. Mlynarski	New Britain
James Miles O'Brien	Bridgeport
John B. Ogilvie	Stamford
Katharine S. Quinn	Bridgeport
Roy C. Robison	Stamford
Vincent T. Shea	Waterbury
Michael E. Vegliante	New Haven

The new officers of the College are Frederick A. Coller, Ann Arbor, Michigan, president; Donald G. Tollefson, Los Angeles, first vice-president; Robert M. Moore, Galveston, second vice-president.

Cancer Control Methods Effective in Connecticut

A person who develops cancer and lives in Connecticut has had a better chance each year since 1935 to overcome the disease. Writing in a recent issue of *The Journal of the American Medical Association,* Matthew H. Griswold, M.D., chief of the Division of Cancer and Other Chronic Diseases, Connecticut State Department of Health, Hartford, points out that survival rates of patients treated for cancer in the State rose markedly during the years 1935-1945.

Although in 1935, only about 28 per cent of patients treated in Connecticut survived three years, the figure rose to nearly 42 per cent in 1943. In 1935, only 22 per cent survived five years, while in 1941 nearly 34 per cent were living five years after treatment. The one year survival rate for 1945 was 58.9 which may be compared to 54.4 for 1944.

Three thousand persons in the state, or about 174 out of every 100,000 in the population, have survived more than five years after being treated for cancer.

Over-all incidence rates for cancer in Connecticut show an increase of 35 per 100,000 among men and 38 per 100,000 among women between a seven year average and the 1945 count, he indicates.

Dr. Griswold attributes the effectiveness of cancer control methods to the interest and cooperation of special groups and of the general public, as well as to increasing medical skill and service.

Two years after the Division of Cancer and Other Chronic Diseases was established, a remarkable increase in hospital and clinic attendance of persons with cancer

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Reprinted from the *Connecticut State Medical Journal*, January 1949.

was noted. In 1938, with the active organization of Connecticut Tumor Clinics and the establishment of new clinics, another big increase in recognized treated cancer occurred, he says.

"In 1941, the distribution of state funds to each of the general hospitals, the systematic backtracking of all cancer from 1935, the development of the state record registry and the establishment of universal follow-up of all cancer patients through the division resulted in a dramatic increase in recognized treated cancer.

"In 1944, with the first successful drive of the Connecticut Cancer Society on a statewide basis, another increase occurred in recorded new cases of cancer.

"In 1946, with the inauguration by the division of the popular and instructive Mutual Education Program, whereby four times a year three physicians from each general hospital visit another general hospital in the state and attend its cancer clinic, another increase in recognized cancer occurred."

Hospital insurance held by an estimated 40 per cent of the population of the state has encouraged the ready use of facilities for cancer, he points out.

"A follow-up over a long period of time is a requirement if accurate appraisal is to be attempted in studying cancer control methods, since the end results of cancer cannot be obtained until years after the onset of the original lesion. The staff of the division has trained new workers and guided experienced ones in hospital after hospital in the technics of obtaining follow-up.

"To know the size of the problem, to have an established follow-up system, to have available diagnostic and therapeutic resources, to have an alert medical profession and an aroused laity, and to have a division of cancer control capable of tabulating and analyzing these factors are all prerequisites to the final evaluation, which is measured in lives saved, in improving the rate of survival."

Daily Hospital Cost of Patient Up

Almost 18 million Americans were admitted into the 6,173 hospitals of the United States in 1947, according to the 1948 American Hospital Directory compiled and published by the American Hospital Association. This represents an average of one of every eight Americans receiving hospital care.

Approximately 16 million patients, two million more than in 1946, were admitted to general hospitals during the year, the Directory reports. In addition, 40 million hospital visits were made by outpatients, those needing special tests or treatments without bed care.

The average cost of caring for a patient for one day in a general hospital rose from $9.39 to $11.09 in the year 1946-1947, according to the Directory. Yet the average income from patients was $9.71, leaving a daily deficit of $1.38 per patient to be made up through voluntary contributions and gifts from the public.

Part of the $2,354,344,000 expended by hospitals in 1947 was for the salaries of the 79 full time employees serving every 100 patients in all types of hospitals, the Directory states. General hospitals had approximately 151 employees for every 100 patients to maintain prevailing high standards of patient care. Hospitals spent about 400 million dollars more in 1947 than in 1946, because of higher wages, higher prices, and expanded services.

The average patient going to a general hospital in 1947 stayed for only eight days, as compared with 9.1 days in 1946, the figures show. This reflects the spreading practice of entering hospitals in earlier stages of illness, possible for increasing numbers of people through Blue Cross and other prepayment plans, as well as wider recognition of the value of hospitals, improved treatment methods, and early ambulation.

Hospitals in 1947 had total assets of approximately six billion dollars, which is more than $42 for every man, woman and child in the United States. Of that amount, general hospitals' plant valuation represents almost three and a half billion dollars, an average of $7,500 per bed.

"Ten years ago, in 1937, 9,221,517 patients were admitted" to hospitals," George Bugbee, executive director of the American Hospital Association reported. "During this ten year span, hospital admissions have increased almost 100 per cent."

The American Medical Accreditation Program

By now, you should have received in the mail an offer to participate in the American Medical Accreditation Program, AMAP. The introductory mailing contained a personalized response card that allows each physician to request a personalized AMAP application kit.

AMAP was developed and funded by the American Medical Association in response to member concerns about the frustrations of credentialing and attempts by non-physicians to define what is quality medical care. AMAP is intended to provide "one stop shopping" for physician credentialing and much more. Wouldn't it be nice if we only had to complete one credentialing form and have it accepted by most of the insurance companies and hospitals? Wouldn't it be better for physicians to recapture our role in setting standards for ourselves? Wouldn't it be better if the standards we develop are valid, open and accessible rather than arbitrary, in a "black box" and inaccessible?

At the present time, the voluntary evaluation process provided by AMAP's comprehensive accreditation program evaluates physicians against national standards, criteria and peer performance in three areas: credentials, including academic, training and work histories; personal qualifications, such as ethical behavior, participation in continuing medical education, peer reviews and self-assessment of performance; and "environment of care," which reviews the clinical, operational and management systems in a physician's office.

Two additional components are currently being developed to address clinical performance, which measures key patient care processes, and patient care results, which measures clinical results, patient satisfaction and health status. It is hoped that these components will be integrated into AMAP by January 2000.

AMAP will verify and update credentials once every two years. It will also do an on-site office and medical records review every two years. The AMAP governing body has recently affirmed that the environment of care site surveyors must be registered nurses. AMAP representatives are actively engaging in discussions with Connecticut health plans, IPAs, hospital groups and others.

The Connecticut State Medical Society is proud to bring this program to its members, joining several other states in which AMAP is active such as Massachusetts, New Jersey, Montana, Utah, Idaho, Hawaii, the District of Columbia, and Maryland. Many other states such as New York, California, and Texas are in discussions with the AMA to bring AMAP to their locales. AMAP will be implemented in Connecticut through the AMA and our own CSMS affiliate, M.D. Advantage.

The success of AMAP is dependent on physicians. If one is happy with the current, disjointed state of affairs in the fields of credentialling and physician standards, do nothing and nothing will change. If we want to take control of these processes, the time to act is now. To be successful, we must present the insurance companies and hospitals with a large, fully credentialed panel of physicians that meet AMAPs standards (and NCQA has agreed that credentials obtained by health plans from AMAP will satisfy relevant NCQA Accreditation Standards).

For the first 90 days of the offering there is no cost to participate in AMAP. The only effort required will be to fill out the initial application. The standards and criteria for AMAP accreditation are available on the AMA's web site at www.ama-assn.org/med-sci/amapsite/index.htm. If you did not receive or have misplaced the response card, contact Michele Norbeck at 203-865-0587 or at mnorbeck@csms.org.

Please don't let this opportunity elude us, the physicians of Connecticut. Please participate in AMAP ASAP!

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Papers prepared on a word processor should be submitted on a diskette along with the hard copy.

Please send them to:

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New Haven, CT 06511

Reflections on Y2K

ROBERT U. MASSEY, M.D.

MY earliest memory of the imminence of the millennium was probably in 1929 or 1930 when my father, who was then 34, and his sister, who was 24, and I were talking about the technological wonders of the 20th century—I believe it was the time when Hugo Eckener was cruising around the world in the Graf Zeppelin—and the matter of the year 2000 came up. One of them said that neither would ever see it, but it was just possible that I might, since I would be in my late 70s then. By now it remains "just possible." In those days in my mind the year 2000 would be a Buck Rogers time, a world of space travel and even small private rockets, worn like a back pack, just to get around town.

A millennium, at least in the common era, has only happened once before, but millennia are by no means uncommon. Since the Big Bang, 12 or 15 million of them have come and gone, yet there has been no real human memory of any but the year 1000, and perhaps 1000, B.C., recalled only in oral tradition until Homer immortalized the fall of Troy in the *Iliad*, and the five books of the Torah were written down. In each instance significant changes in European history occurred near the millennia: Israel's tribal period ended and Saul was made king, and the Greeks sacked Troy. Perhaps more important, technology went from bronze to iron, resulting in momentous changes in warfare and agriculture: sharper and more durable, armor-piercing weapons, and iron rather than wooden plows.

Few of us fail to recall our high-school history: 1066 and all that. But 1054, traditionally marking the schism between the Greek and Latin churches, still resonates in the former Yugoslavia, and continues to echo in the divisions between NATO and non-NATO Europe. Robert W. Southern, the Oxford historian, observed that the years framing the formation of western Europe were 972 to 1204. In this 232-year period the West recovered its Hellenic traditions of learning and vigorously embraced Aristotelian logic. "There were of course resounding events," wrote Southern, "the capture of Jerusalem by the Crusaders in 1099, and of Constantinople by their successors in 1204, ... but their greatness lies less in their practical consequences than in their indication of the forces at work in the world." Before 972 few European scholars read Greek and mostly only Jewish scholars read Arabic; virtually no works of Aristotle had been translated into Latin. By the years 1150 to 1200 all were available, as well as the works of the great Arabic philosophers, Avicenna and Averroës.

As were many of the Moslem scholars, Avicenna (Ibn Sina), 980-1037, was a physician whose *Canon* of medicine filled volumes, including the systems of Hippocrates, Galen, and Aristotle. Incidentally he described the guinea worm (the human parasite, *Dracunculus medinensis*), anthrax, and diabetes. Averroës, 1126-98, a Spanish Moslem, was also a physician, but even more a philosopher. It was these Arabic philosopher-physicians who were largely responsible for the reintroduction of Aristotle into the Western world through a growing number of brilliant European clerical scholars such as Gerbert (later Pope Sylvester II), Peter Abelard, and Thomas Aquinas. On the threshold of the 21st century Aristotle's logic remains the standard, although as always in more or less opposition to Platonism and Neo-Platonism, and their offspring, along with a host of airy postmodern and New Age doctrines. Conflict or no, neither modern science nor political theory of the late second millennium, especially since the 17th century, would have been possible without a rugged underpinning of Aristotelian reasoning.

Stephen Joel Trachtenberg, formerly president of the University of Hartford, and now president of George Washington University, recently wrote of recent radical change:

> Let me try to cast a little light on the subject by presenting a somewhat radical hypothesis. My thought is that in the second half of the 20th century we have so dramatically revised our sense of time, space, and human

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ROBERT U. MASSEY, M.D., Professor Emeritus, Division of Humanistic Studies, Department of Community Medicine and Health Care, University of Connecticut School of Medicine, Farmington.

> culture that the gulf between a Stone Age tribe and America in 1950 is narrower than the one between America in 1950 and America today.

President Trachtenberg and I had conversations like this back in his Hartford days, and since we are both given to bursts of hyperbole, this somewhat overblown statement may be forgiven. But there is in it more than a germ of truth. I might have included the last 150 years to capture the major advances in medicine and biology. The centuries in the "penumbra" of millennial change have been turbulant years, like the weather about the time of the solstices, times to batten down the hatches, watch the cargo, and maintain a firm grip on the tiller.

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160 St. Ronan Street
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The Robert U. Massey History of Medicine Society

Upcoming Schedule of Presentations

February 10

Ira Spar, M.D., Assistant Clinical Professor of Surgery,
University of Connecticut School of Medicine

Yellow Jack in the Civil War

March 10

Richard L. Judd, Ph.D., President,
Central Connecticut State University

1966: The Birth of Modern Emergency Medicine

The Robert U. Massey History of Medicine Society is an association of individuals interested in presentations and discussions on the history of medicine. The society seeks to foster an understanding of medicine's history and an appreciation for the cultural and social settings in which medical developments have taken place. The society also seeks to encourage health sciences students to acquire an appreciation for their historical heritage.

The society is affiliated with the University of Connecticut Health Center and is open to those who have an interest in the history of medicine. A roster of members is maintained in the Department of Community Medicine and Health Care. Those who wish to be included on the membership roster should notify this department to be included on the mailing list for society lectures. The willingness of members to present lectures or recommend speakers contributes to the society's ability to maintain community interest and to attract new members.

The society meets the 2nd Wednesday of the month at 5 P.M. in Lecture Room A of the University of Connecticut Health Center. *For further information:* Theo Ungewitter, Department of Community Medicine, University of Connecticut School of Medicine, 263 Farmington Avenue, Farmington, CT 06030-1910; (860) 679-2356; *email:* ungewitter@nso.uchc.edu

This Month's Reading in Review

TIMOTHY B. NORBECK

Insurance companies, trade groups, and the other opponents of managed care spent $60 million to lobby Congress in the first half of 1998, an average expenditure of $112,000 per member of Congress.... The industry's lobbying tab dwarfs the $14 million spent by reform advocates such as the AMA, the AFL-CIO, and other groups.... It even exceeds the $40 million spent by the tobacco industry to defeat comprehensive antismoking legislation earlier this year.... The Philadelphia Enquirer pointed out that the "figure does not include $11 million spent on advertising against the managed care legislation, nor millions of dollars in campaign contributions that opponents of new regulations made in the recent congressional campaigns."

Dallas Morning News (28 November 1998)

According to statistics compiled by the Crystal Report on Executive Compensation, HMO executives "are among the most highly paid CEOs in the country," out-pacing their CEO counterparts in other industries by a factor of two to three.... After analyzing "the pay packages of 1,568 CEOs in 31 industries" and accounting for "company size and stock performance," the study found that HMO executives topped the list, followed by CEOs of drug manufacturers and biotech companies, brokerages, and computer companies.

Los Angeles Times (10 December 1998)

"It turned out that HMOs were not really all that much more efficient at treating the sick. Government's conventional Medicare program, in effect, was getting stuck with the sickest, and most costly group of oldsters, while for-profit HMOs were making tidy profits creaming off the healthier ones. So in the 1997 Balanced Budget Act, Congress put a stop to the gravy train and cut back what it paid Medicare HMOs. Many HMOs, in response, decided to cut benefits or to dump senior coverage entirely." Columnist Robert Kuttner's view of why HMOs are abandoning the Medicare program.

Boston Globe (22 November 1998)

A Bureau of Managed Care has been created within Florida's Department of Insurance to help monitor HMOs.... The move fulfills a campaign pledge by recently re-elected Florida Insurance Commissioner Bill Nelson (that position in Connecticut is appointed by the Governor).... "With the growing role of HMOs and managed care," he said, "there was a feeling that this area of the market needed greater focus." The new bureau will include 17 employees.

Florida Times-Union (30 November 1998)

A new Harris Poll indicates that doctors rank third among a handful of professions in a survey gauging the public's trust.... 83% of respondents said they would generally trust doctors to tell the truth, placing them only behind teachers (86%), and clergy (85%).... Among other professions tested in the survey, scientists and judges claimed 79%—professors 77%—civil servants 70%—and the president 54%.... Bringing up the rear were business leaders (49%), Members of Congress (46%), journalists (43%), and trade union leaders (37%).

A companion poll in Great Britain found the U.K. residents are far less trusting than Americans.... While doctors actually came in higher (86%) in Britain, other professions, such as scientists (63%), civil servants (36%), business leaders (29%), and journalists (15%), fared worse.

Harris release (10 November 1998)

According to new data from The Centers for Disease Control and Prevention, "Americans are making steady gains in their health," with life expectancy in the U.S. moving to an all-time high in 1997 and the infant mortality rate falling to a new low.... Life expectancy in 1997 was 76.5 years, up from 76.1 years in 1996, and infant mortality was 7.1 deaths per 1,000 live births, down from 7.3 in 1996.... The teenage birthrate fell 3% last year to 52.9 births per 1,000 females ages 15 to 19, from 54.4 births in 1996.

Albany Times Union (9 December 1998)

The 16 million Americans under 65 "who have to buy their own health insurance are facing increases of 40% or more this fall."... As a result, many individual policy holders "are just a step away from joining the nation's 43.4 million uninsured."

New York Times (8 December 1998)

Only In America: In California, a man's conviction for first degree burglary for breaking into an occupied dwelling was thrown out on the technicality that the occupant of that dwelling had died of natural causes minutes before the break-in.

The Washington Monthly (November 1998)

TIMOTHY B. NORBECK, Executive Director, Connecticut State Medical Society.

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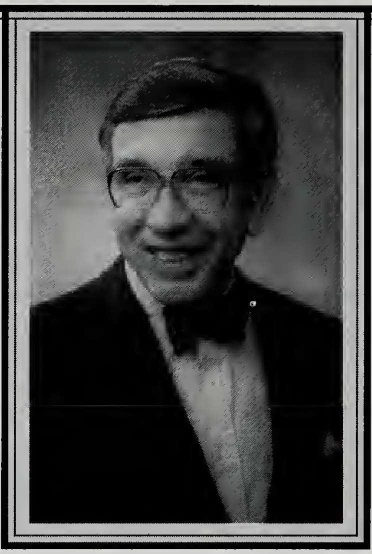

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We thank you, and we wish you and June a very pleasant retirement from editorial cares.

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Connecticut Medicine

The Journal of the Connecticut State Medical Society

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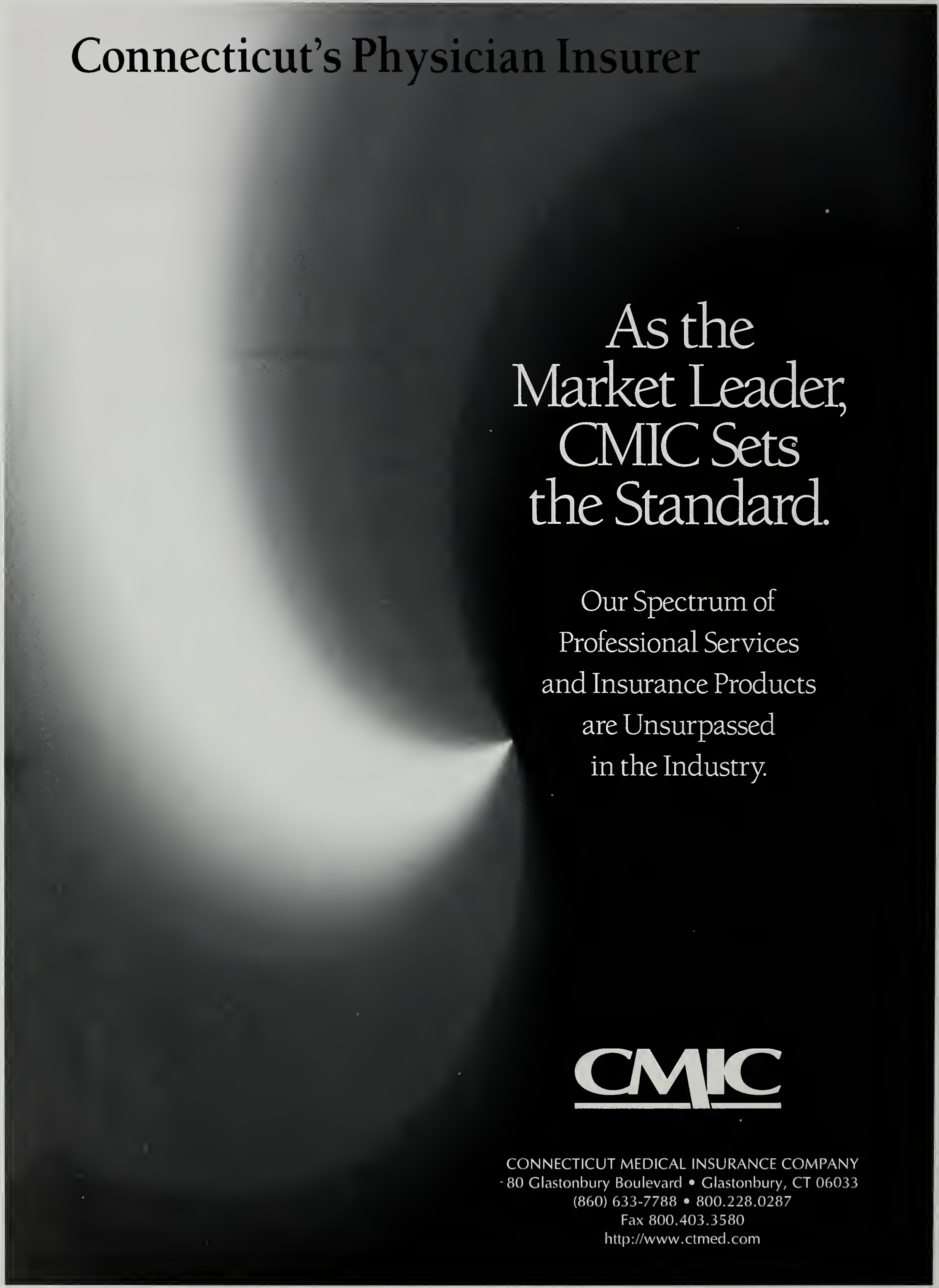

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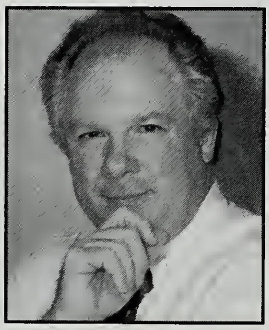

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Elevated Serum Creatine Kinase and MB Isoenzyme Levels in Hypothermia—A Brief Case Report

KEITH A. LANDESMAN, M.D., JEFFREY GREEN, M.D.,
AND RICHARD H. LANDESMAN, M.D.

Case Report

A previously well 89-year-old woman was brought to the hospital by her family for confusion after she was found in a bathtub of cold water. On admission, her rectal temperature was 29 C, pulse 55 per minute, respirations 16 per minute, and blood pressure 115/50. Physical examination revealed coarse breath sounds bilaterally without other abnormalities or evidence of trauma. Serum chemistry and thyroid function studies were within normal limits. Three sets of cardiac enzymes were obtained: 1) on admission; creatine kinase (CK) 858 U/L, MB index 3.4% (reference 0.0-2.5%), 2) eight hours after admission; CK 929 U/L, MB index 3.0%, 3) 16 hours after admission; CK 1,534 U/L, MB index 1.6%. The inital electrocardiogram revealed sinus bradycardia with a heart rate of 55, an undulating rhythm baseline secondary to shivering, and Osborn J waves without ischemic findings. Additional electrocardiograms showed no significant changes. An echocardiogram was obtained which showed normal biventricular function without wall motion abnormalities. She was successfully treated for hypothermia with warmed intravenous normal saline, gastric and bladder washings, and an external warming blanket.

Discussion

Although our patient had elevated serum CK and CK-MB levels, we believe that she did not have a myocardial infarction based on the absence of chest pain or ischemic electrocardiogram findings, along with a normal echocardiogram. Rather, these CK and CK-MB elevations seem to be secondary to hypothermia as there was a clear environmental exposure. There have been previous reports of elevated serum levels of CK,[1] and CK-MB isoenzyme[3] in hypothermic patients. Carlson et al[3] reported six cases of hypothermia with an elevation in both CK (mean 592) and MB index (mean 10.7%). These patients had no evidence of myocardial infarction based on clinical examination, serum lactate dehydrogenase levels, or electrocardiography. Three patients were examined at postmortem and found to be without gross or microscopic evidence of myocardial infarction. Similarly, Maclean et al[4] performed autopsies on 13 patients after hypothermic episodes and found evidence for only one myocardial infarction.

We conclude that there is now a significant volume of evidence showing that hypothermic patients may present with elevated serum CK and MB isoenzyme activities. Further, these elevated serum CK levels do not seem to be secondary to myocardial infarction[3,4] or myopathy.[2] The etiology of the serum CK and MB elevations in hypothermic patients remains unknown but may represent either global ischemia or changes in regional distribution of blood flow.

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Femoral Neuropathy Following Anticoagulant Therapy: A Case Report and Discussion

ROHIT AHUJA, M.D. AND PERU VENKATESH, M.D.

ANTICOAGULANT therapy is commonly employed in modern day practice and may be associated with retroperitoneal bleeding complications. The clinical manifestations of retroperitoneal bleeding may be atypical as in this case in which femoral neuropathy was the only presentation. It is important to recognize atypical presentations as early diagnosis can influence prognosis.

Case Report

A 62-year-old man was admitted to the hospital with deep vein thrombosis (DVT) in his right leg and multiple pulmonary emboli (PE). He had suffered an episode of DVT six months previously for which he had been on Coumadin until a month before the recurrence of venous thromboembolism. An intravenous heparin infusion was commenced (according to a protocol aiming for a therapeutic activated partial thromboplastin time (PTT) between 60 and 80 seconds) and warfarin (Coumadin) for PE/DVT. The results of assays for antithrombin III, protein C, protein S, and lupus anticoagulant on the day of admission were negative. During his hospitalization he developed a partial small bowel obstruction which was managed conservatively. On hospital day six, he complained of right inguinal pain, which he described as sharp, constant, nonradiating, and associated with inability to move his right leg due to pain. The next day the patient complained of numbness in his right thigh accompanied by an inability to flex his right hip. Physical examination revealed a normal abdomen, pain on passive extension of the right hip, and decreased sensation on the anteromedial aspect of the thigh. Laboratory data included: Hematocrit of 42.1% (essentially unchanged from admission), and an activated PTT of 79.8 seconds. On hospital day eight, the inguinal pain increased in intensity. Further examination showed profound weakness of right hip flexion (power 0/5) and right knee extension (power 3/5), with diminished knee reflex and persistence of numbness on the anteromedial thigh. Hematocrit was 39.5% and PTT >100 seconds. A computerized tomographic (CT) scan of the abdomen revealed a retroperitoneal hematoma in the right iliacus muscle (Fig. 1). At this point the heparin was discontinued, anticoagulation was reversed with fresh frozen plasma, and a Greenfield filter placed. He underwent surgical evacuation of the hematoma. The EMG findings were consistent with a right femoral neuropathy with a major loss of voluntary motor unit activity. Following decompression of the hematoma, there was relief of inguinal pain and partial recovery of hip flexion and knee extension over the next week. He was discharged and after three months he continued to have some residual deficit with his strength for hip flexion and knee extension being 4/5.

Discussion

Retroperitoneal hematoma of the iliopsoas muscle is a recognized complication of anticoagulant treatment (7%).[1] In most cases (60%), it is due to intravenous or subcutaneous heparin.[2] Although in most cases the hypocoagulability is excessive, in about 40% of cases, the coagulation profile can be normal.[2] The femoral nerve arises from the branches of the second, third, and fourth lumbar nerves, traverses the psoas major, and locates under the fascia iliaca, separated from the femoral vessels, before it passes beneath the

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ROHIT AHUJA, M.D., resident, Department of Medicine, University of Connecticut Health Center; PERU VENKATESH, M.D., M.R.C.P. (U.K.), assistant director, Department of Medicine, Hartford Hospital.

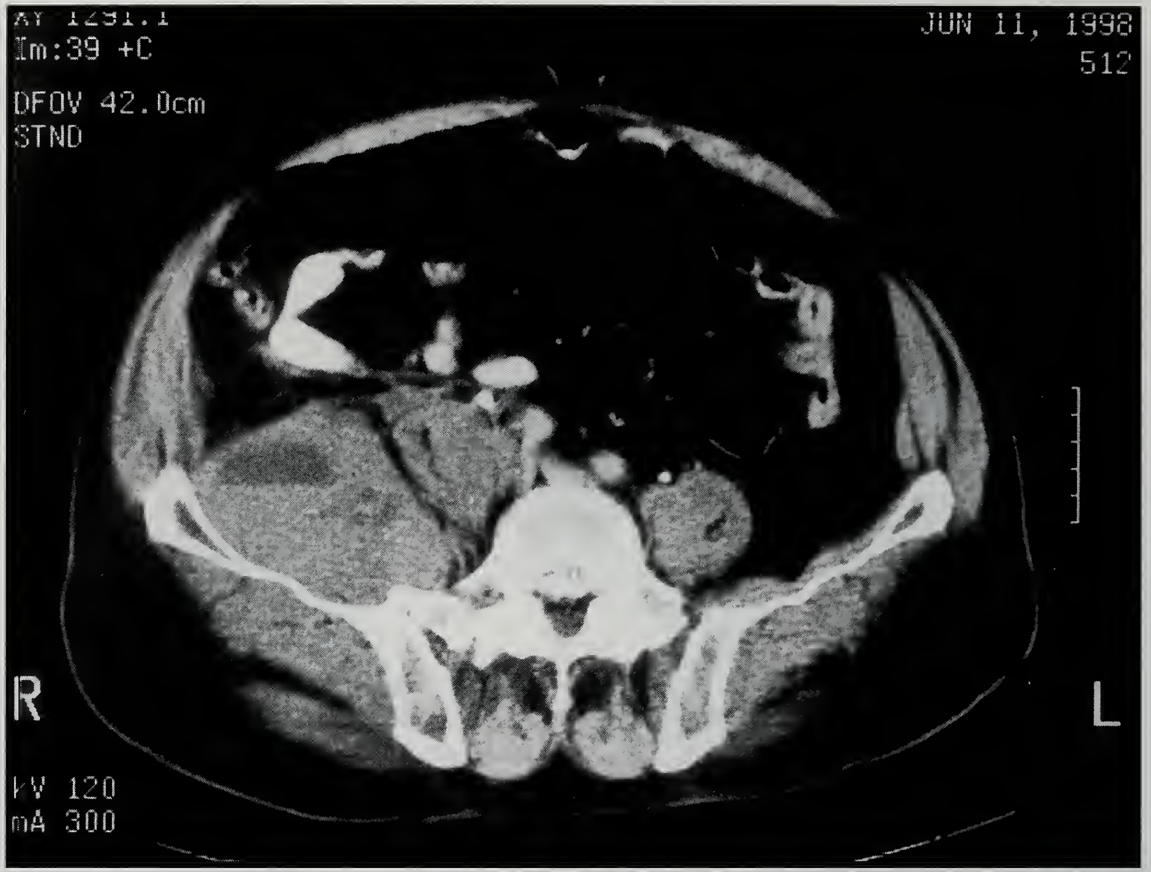

Figure 1.—Retroperitoneal hematoma in the right iliacus muscle pushing the right psoas.

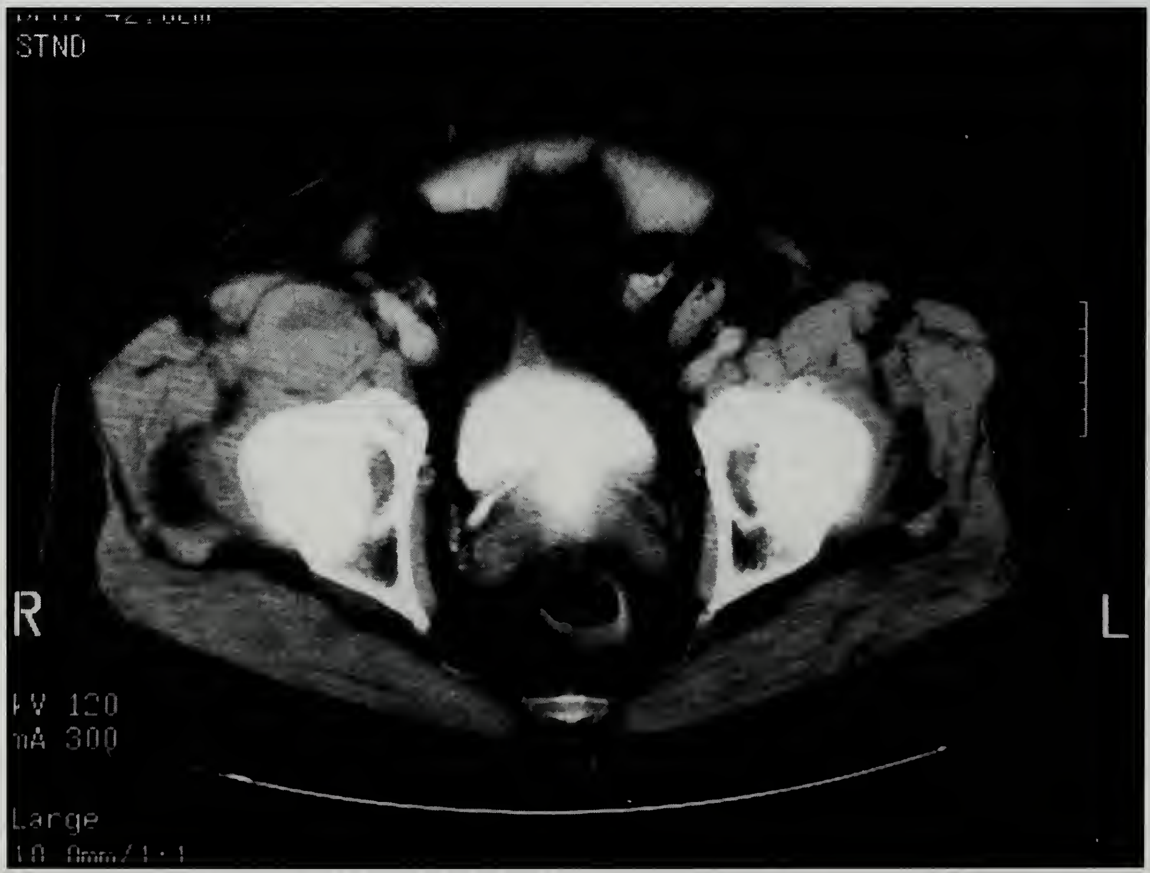

Figure 2.—The hematoma tracks into the right groin where it displaces the femoral vein, femoral artery, and femoral nerve medially.

inguinal ligament in a groove between the iliacus muscle and the psoas major muscle. Distal to the ligament, branches go to the quadriceps muscle, the hip, and the knee joint, the skin in the anteromedial aspect of the thigh, and the skin in the medial aspect of the crus. Femoral neuropathy is caused by compression-anoxia of the nerve behind the inguinal ligament beneath the tight nondistensible fascia iliaca.[3] This can appear as a result of bleeding or hematoma secondary to trauma, hemophilia, or anticoagulation therapy.

The clinical presentation is usually typical: onset is characterized by acute onset of violent groin and thigh pain with characteristic flexion and external rotation of the extremity. The pain is aggravated by leg extension. There are accompanying parasthesias in the sensory distribution of the nerve and paresis of the quadriceps muscle.[3] Usually the femoral nerve lesion is seen soon after introduction of the anticoagulation therapy. The deficit develops rapidly, over less than 48 hours.[4] In many cases it may be severe and produce long-lasting disability.

The diagnosis can be made by radiological imaging including the abdominal ultrasonography and the CT scan. In the last decade, CT scan has become the modality of choice to diagnose retroperitoneal hematoma. It can easily define the size and extent of the bleed allowing for early intervention and should be used in all patients developing peripheral nerve impairment during anticoagulant therapy.[5,6]

Management involves discontinuation of anticoagulants, administering Vitamin K, fresh frozen plasma, or protamine. Surgical decompression relieves the pain provides for early efficient physiotherapy and regression of the femoral paralysis much more rapidly and with reduced chances of residual paresis than in the absence of surgery.[2]

This case calls to attention the need for a high index of suspicion for bleeding complications associated with anticoagulant therapy, even when they are associated with atypical manifestations or when the coagulation assays are in the normal range. Early diagnosis is essential as iliopsoas hematomas may cause severe and occasionally fatal hemorrhagic shock.

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Abstracts:
Sixth Annual Meeting and Scientific Assembly of the Connecticut College of Emergency Physicians

18 November 1998

FORWARD: The Sixth Annual Scientific Assemply of the Connecticut College of Emergency Physicians was held on 18 November 1998, at the Saybrook Point Inn, Old Saybrook. Eleven abstracts were accepted for presentation, they are issues related to emergency medicine and are separated into two categories: six oral and eight poster presentations.

False Negative Decisions are the Cause of Poor Outcome in Appendicitis Patients

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New Britain General Hospital, Department of Surgery, University of Connecticut School of Medicine,
Connecticut Peer Review Organization, Middletown

Objective.—Quantify physician performance in evaluation of patients for appendectomy.

Design.—Consecutive cohort in 11 emergency departments of 100 consecutive patients.

Results.—1,037 patients with appendectomy were studied with 110 [10.6%] false positive decisions [range 5% to 20%] and 177 [19.0%] false negative decisions [range 9% to 28%]. Hospital delay until surgery was nine hours [95% CI 8.0,9.9] for true positives, 72.3 hours [95% CI 51.5,93.1] for false negatives. False negative decision rate correlated with poor outcome: increased risk of perforation [r=.59, *P*=.05], abscess formation [r=.82, *P*=.002]. Patients whose diagnosis was missed had significantly fewer signs and symptoms of appendicitis than patients diagnosed (appendicitis score 1.42 [95% CI .98,1.86] *vs* 6.4 [95% CI 6.2,6.54]). False positive decisions were in patients with signs and symptoms similar to appendicitis patients (score 5.7 [95% CI 5.24,6.08] *vs* 6.3 [95% CI 6.29,6.54]). Appendicitis patients during observation developed more signs and symptoms (4.2 score [95% CI 3.0,5.5] to 6.2 [95% CI 5.1,7.2]). Hospitals with observation units had more "rule out appendicitis" evaluations of abdomen pain patients than hospitals without (33.4% [95% CI 27,38] *vs* 24.6% [95% CI 23,27]).

Conclusions.—Adverse outcomes (perforation, abscess formation) correlate with physician false negative decisions and are in appendicitis patients with few clinical findings.

Characteristics of Patients Presenting to the Emergency Department with Seizures

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Purpose.—Patients with seizures are common in emergency departments (EDs) yet there is little literature describing demands on emergency medical services and ED resources. This study was performed to determine the frequency with which patients with seizures present to the Bridgeport Hospital ED, characteristics of their care, diagnostic activities, treatment, and disposition.

Methods.—The Bridgeport Hospital ED was one of 10 academic EDs monitoring all patients presenting with a complaint related to a seizure disorder over an 18.25-day period (5% of the year) in November 1997. Patients were identified concurrently or retrospectively by reviewing the ED registration log.

Results.—Thirty-seven patients presented to the Bridgeport Hospital ED with a chief complaint related to seizures. This represented 1.3% of the ED census of 2,824 patients seen during the study period. Twenty-eight (76%) utilized EMS. Twenty-two of the 28 (78.6%) transported by EMS required advanced life support care. Anticonvulsant drugs were administered to 62% of patients. Eighty-one percent of patients had a known history of a seizure disorder. Traumatic injuries related to seizures were reported in 13.5%. Status epilepticus, using standard definitions, occurred in only 8%. Ethanol or noncompliance with anticonvulsant medication was implicated as contributing factors in 51% of patients. Only 8% of patients required hospital admission. Local data mirrored that submitted from the other participating centers.

Conclusions: Patients with seizures are common in the ED population, and make significant demands on prehospital and ED resources. Most patients are discharged from the ED after a diagnostic work-up and/or administration of medication.

Free Fatty Acid Binding Protein to Risk Stratify Patients for Myocardial Ischemia

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Hypothesis.—Fatty acid binding protein (FABP) is a blood test that can be used in the emergency department (ED) to identify patients needing evaluation for myocardial ischemia.

Background.—Blood tests and ECGs are used to evaluate for the possibility of acute myocardial infarction and then provocative tests (eg, exercise treadmill) to evaluate for unstable angina.

Methods.—Prospective clinical trial in ED of a community teaching hospital. Patients with possible myocardial infarction or unstable angina had blood drawn and tested quantitatively for four biomarkers: creatine kinase, creatine kinase MB isoenzyme, myoglobin, troponin I, and FABP. Clinical diagnosis was compared with biomarker results and analyzed by 2 x 2 contingency tables. Positive threshold was > 80% sensitivity in identifying unstable angina and > 30% specificity high.

Results.—Two hundred two patients were entered in the study after exclusions with 30 [6.6%] found to have unstable angina and 21 [10.4%] myocardial infarction. FABP at > 6 mcg/L had the best performance in identifying patients with unstable angina [83% sensitivity, 95% CI 67,90, 31% specificity, CI 32,49], myoglobin at > 40 mcg/L [50% sensitivity, CI 43,73, 53% specificity, CI 45,63], and troponin I at > 0 [23% sensitivity, CI 24,52, 85% specificity, CI 77,91].

Conclusion.—FABP may be a useful blood test for risk-stratifying patients for unstable angina.

A Simple Strategy to Improve Emergency Department Out-Patient Contact Following Discharge

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Objective.—Contacting patients by telephone after they have left the emergency department (ED) is often difficult. The purpose of this study was to assess a strategy to improve adult ED telephone contact rates.

Methods.—This study was a prospective, randomized trial of a predischarge interview in a convenience sample of patients leaving a community teaching hospital. Inclusion criteria were: English speaking patients 18 years of age and older. Exclusion criteria were: patients triaged to level one care, or altered mental status. Patients enrolled in the study were randomized into two groups. Patients in group one had a copy of their chart and demographic information collected. Group two patients were asked a scripted set of questions by a research associate confirming the patient's telephone number, a beeper number, if applicable, and a time when a follow-up call could be expected. All patients were called back during weekdays within four days of discharge. Data collected were: patient age, race, sex, medical insurance, whether contact was made, and the number of calls required for contact. Comparisons between the two groups were made using χ^2 analysis.

Results.—Eighty seven group one control patients and 76 group two intervention patients were enrolled. There were no statistically significant differences between the demographic information in the two groups. Forty-seven (54%) group one patients were contacted and 58 (77%) group two patients were contacted ($P<.003$). Thirteen (17%) group two patients provided a beeper number. Only one patient was contacted by beeper.

Conclusion.—A simple patient interview, conducted immediately prior to discharge, significantly improved patient contact rates in our ED. If patient management may require contact after discharge, then setting a time when a follow-up call can be expected and confirming the patients' telephone numbers before they leave will improve this communication.

Is Nuclear Imaging Required in the Evaluation of "Low Risk" Chest Pain

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Background.—Patients presenting to emergency departments with chest pain demonstrating no interpretable ischemia by ECG criteria are frequently deemed "low risk" for ischemic heart disease. Such evaluations are often completed in chest pain observation centers. The method, and thereby technology required to carry out these evaluations, remains unclear.

Study objective.—We report how often nuclear imaging was required to evaluate this patient population at our center.

Design.—Prospective consecutive case enrollment of 120 patients admitted to an academic, tertiary care emergency department chest pain center.

Results.—Of 120 patients only four patients (3.3%) had indication for nuclear imaging (digoxin, left ventricular strain, or left bundle branch block). Subsequently, one patient out of four (25%) required hospital admission because of the results of this testing.

Conclusion.—Nuclear imaging is rarely required in the evaluation of patients with chest pain and no interpretable ischemia by ECG criteria.

Emergency Medical Services and Emergency Department Interactions: Problematic Areas Identified

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Objective.—Little has been written about the interaction between prehospital emergency medical services (EMS) and the emergency department (ED) from the perspective of EMS providers. We undertook a study to identify which aspects of the EMS and ED interaction are problematic and potentially correctable.

Methods.—Over a seven month period, we conducted a survey of approximately 600 EMS providers certified as either Emergency Medicine Technician (EMT), Emergency Medicine Technician Intermediate (EMT-1), and Emergency Medicine Technician Paramedic (EMT-P). To date 112 responses were received from providers who routinely transport patients to the ED. We received responses from 45 EMTs, 21 EMT-Is, and 41 EMT-Ps. The setting was an urban teaching hospital ED with an annual census of 62,000. The survey addressed three major areas: radio and communications, interactions with ED staff, and equipment and supplies. The respondents quantified their satisfaction in these areas using a five-point scale ranging from very poor = 1 to very good = 5.

Results.—Our survey identified six points of dissatisfaction in the EMS–ED interface: 1) availability of ED physician for medical control (mean satisfaction [MS] 2.88±1.86, n=41); 2) physician willingness to approve orders for medication administration [MS 2.18±2.02, n=41]; 3) physician awareness and understanding of EMS controls [MS 2.58±1.89, n=41]; 4) attitude and attentiveness of the triage nurse upon arrival [MS 2.91±1.15, n=112]; 5) availability of patient-care nurse for report [MS 2.67±1.11, n=112]; and 6) the security of EMS equipment left in the ED [MS 2.98±1.29, n=112].

Conclusion.—Several areas of the EMS–ED interaction have potential for improvement. We believe that increasing EMS provider satisfaction in the ED will translate into higher job satisfaction and ultimately improve patient care. Further research is needed to determine which interventions will be most effective to this end.

Emergency Department Compliance with Poison Control Center Decontamination Advice

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We present the first study evaluating how often emergency departments (EDs) comply with poison control center decontamination advice.

Methods.—Patients being evaluated in EDs for suspected toxic exposure were eligible for the study if decontamination had not been initiated prior to poison control center consultation. A χ^2 analysis was done to compare the rates of compliance with decontamination advice given for pediatric patients *vs* adults and for recommendations to use activated charcoal *vs* oro-gastric lavage. When decontamination advice was not followed, the treating physician was called to determine the reason. A panel of toxicologists reviewed these cases to determine if the recommendations were appropriate.

Results.—Decontamination advice was not followed in 52/400 (13%) of cases. No difference was seen in compliance with decontamination advice given for pediatric patients relative to adults (P=0.9). Charcoal was more likely to be given when recommended, compared with doing lavage, but this difference did not reach statistical significance (P=.07). The reviewing toxicologists felt that the recommendations made were appropriate in 92% to 98% of these cases. One adverse event occurred that may have been related to not following poison control center decontamination advice.

Conclusions: Poison control center decontamination advice is not followed by EDs in a significant minority of cases. The implications for patient outcome requires further study.

Determinants of the Reliability of Musculoskeletal Physical Examination in Blunt Trauma

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Objectives: Trauma patients who are cognitively intact will have a reliable examination despite being intoxicated (blood ethanol level ≥ 100 mg/dL).

Methods: Data were collected prospectively in a convenience sample of blunt-trauma patients at a Level I trauma center. This included a brief assessment of cognitive impairment, complaint of bone pain, and soft tissue tenderness or deformity over different bony regions. Ethanol levels were determined on all patients. Films beyond the standard advanced trauma life support series were ordered at he discretion of the physician. Inclusion criteria: triage to the trauma room, blunt trauma, age ≥13, GCS 15 on arrival to trauma room. Exclusion criteria: age <13, GCS <15, isolated penetrating trauma, incomplete documentation. Radiograph findings were recorded by the research physician. This study was approved by the institutional review board.

Results.—Of the patients enrolled, 85% passed the brief cognitive examination. Fifteen percent of these patients were intoxicated. However, no fractures were missed in this group despite an ethanol level > 100 mg/dL. There was one missed injury that occurred in a nonintoxicated patient. Further analysis of data is pending.

Discussion.—In a previous unpublished study of intoxicated trauma patients and reliability of the pelvis examination, there was no compromise in the examination of those patients with ethanol levels ≥ 100 mg/dL. This study was undertaken to validate those findings and determine if an examination would be reliable in an intoxicated patient who was considered cognitively intact. These preliminary data indicate that the cognitively intact patient will have a reliable examination despite an ethanol level of > 100 mg/dL.

Utility of Chest Radiograph in the Evaluation of Nontraumatic Chest Pain Patients

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Objective.—To evaluate the incidence of positive chest radiographs in patients with isolated nontraumatic chest pain and to attempt to develop a set of clinical prediction rules to guide the ordering of chest x-ray films in these patients.

Methods.—Patients 18 years or older receiving chest x-ray films during their workup for a chief or significant complaint of nontraumatic chest pain in an urban teaching and a suburban university emergency department were prospectively enrolled in this study as a convenience sample. Prior to ordering chest x-ray films, physicians and physician extenders completed a questionnaire for each patient with regard to the presence or absence of items in the history and physical. A chart review was done to complete partially finished questionnaires and to provide x-ray readings and other clinical information. Sensitivity and specificity were calculated for the various items in the questionnaire and logistic regression weas used to derive significant predictors.

Results.—In a sample of 371 nontraumatic chest pain patients with chest x-ray films, 75 patients (20%) had positive findings. The presence of at least one item in the history and physical had a sensitivity of 94.7% (CI, 89.6%–99.8%), specificity of 30.8% (CI, 28.1%–33.5%), and negative predictive value (NPV) of 95.7% for positive chest film result. Significant predictors are sensation of dyspnea, history of congestive heart failure, RR>24, peripheral edema, abnormal lung sounds other than wheezing, and jugular vein distention. The sensitivity, specificity, and negative predictive value of the presence of any of the predictors are 85.3% (CI, 77.3%–93.3%), 63.8% (CI, 58.3%–69.3%), and 94.4%, respectively.

Conclusion.—Chest x-ray film appears to contribute little additional information to evaluation and management of patients with isolated nontraumatic chest pain. We are currently conducting a prospective evaluation of the prediction rule.

College Research Associates as Screeners for Women's Health Issues in an Urban, Community, Teaching Hospital

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Introduction.—The emergency department has been identified as a potential site for a number of primary health screening efforts. Competing priorities make this difficult for clinical staff to accomplish. Screening tests for cervical and breast cancer and identifying victims of domestic violence are among the many entities whose screening has been advocated in the emergency department.

Objective.—To determine if College Research Associates (RAs) could successfully screen adult female patients attending a community teaching hospital emergency department for having their cervical and breast cancer screening up to date and for domestic violence as a problem in their lives.

Methods.—RAs received training about screening for these primary health issues using a formatted script which took about 90 seconds to administer. Thirteen RAs served a weekly four-hour shift in the emergency department for 10 weeks. When not enrolling patients in other studies, they attempted to screen as many adult women as possible in the closed room, nonacute areas of the emergency department. If patients said that is was more than one year since their last PAP smear or clinical breast examination, they were encouraged to accomplish this as soon as possible. A follow-up call was made at one month to see if the missed tests had been done. If the patient answered positively to any one of the three Feldhaus questions on domestic violence, this information was coveyed to the emergency physician and appropriate referral was arranged. All patients received information on cervical and breast cancer and INFOLINE cards with the telephone number for domestic violence referral were embedded in an alphabetical list of social service agencies.

Results.—Four hundred forty-one women were approached for screening. Three hundred fifty-three (80%) were screened; 62 (14%) refused screening, 25 (7%) of those agreeing could not be screened. One hundred sixty-six (47%) had had their last PAP smear more than 12 months previously. One hundred forty-seven (42%) had their last clinical breast examination more than 12 months ago. One hundred ninety-six (56%) needed at least on of these tests done. Thirty-seven (10.5%) of the women answered "yes" to at least one of the Feldhaus questions for domestic violence. Twenty-nine (8%) had been hit within the past year, 10 (3%) felt unsafe in their current relationship, and 17 (5%) felt unsafe from a prior relationship.

Conclusions.—College Research Associates can successfully screen for primary health-care issues in the emergency department. This screening identifies important health needs of women attending the emergency department.

Use of a Pediatric Observation Unit for the Management of Poisoned Patients

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Background.—Data regarding the utility of observation units in pediatric patients are limited. The purpose of this study was to describe the utilization of a pediatric observation unit for poisoned patients.

Methods.—Retrospective cross-sectional review of emergency department (ED) visits, observation units, and inpatient admissions for poisoned children (age less than 18 years) cared for at a freestanding children's hospital. Prevalences with 95% confidence intervals (CI) for observation units use and relapse rate within two days, and odds ratios with 95% CI for use of the observation unit for poisoned patients were calculated, with a significant $P < 0.01$.

Results.—Over 24 months, there were 506 ED visits and 73 pediatric observation admissions for poisoning. Forty-one patients (56%) were female. Mean age was 6.8±6.4 years. Unintentional poisoning accounted for 63% (47/73) of patients. Most common exposures were cardiovascular agents 23% (17/73), alcohols 16.4% (12/73), over the counter products 12.3% (9/73), anticonvulsants 12.3% (9/73), and natural products 10.9% (8/73). Degree of illness, according to the American Association Poison Control Center definition, was 46.6% (34/73) asymptomatic, 30.1% (22/73) mild symptoms, 20.5% (15/73) moderate symptoms, and 2.7% (2/73) severe symptoms. Fifty-three patients (73%) received decontamination. Nine patients (12.3%) received antidotes. The average length of stay in the observation unit was 10.8±5.3 hours. No observation patients subsequently required admission to the hospital, (95% CI: 0, 7.4%).

Conclusions.—In this population, a pediatric observation unit was an effective clinical care site for poisoned patients with no identified revisits or requirement for inpatient admission.

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EPITOMES OF PROGRESS

Important Advances in Clinical Medicine

Radiology

Nancy Ellerbroek, M.D., and John McGahan, M.D., Section Editors

The Council on Scientific Affairs of the California Medical Association presents the following epitomes of progress in radiology. Each item, in the judgment of a panel of knowledgeable physicians, has recently become reasonably firmly established, as to both scientific fact and important clinical significance. The items are presented in simple epitome, and an authoritative reference, both to the item itself and to the subject as a whole, is generally given for those who may be unfamiliar with a particular item. The purpose is to assist busy practitioners, students, researchers, and scholars to stay abreast of these items of progress in radiology that have recently achieved a substantial degree of authoritative acceptance, whether in their own field of special interest or another.

The items of progress listed below were selected by the Advisory Panel to the Section on Radiology of the California Medical Association, and the summaries were prepared under the direction of Drs. Nancy Ellerbroek and John McGhan and the Panel.

Intensity Modulated Radiation Therapy

THE goal of radiation therapy treatment planning is to deliver a maximal dose to the tumor-bearing region, while minimizing the dose to sensitive normal tissues surrounding the tumor. Currently this task is usually performed by shaping the incident treatment fields to the projection of the tumor using simple customized blocks. The radiation beams are of uniform intensity across the field, or modified by simple devices such as tungsten wedges.

A new approach, intensity modulated radiation therapy (IMRT), uses radiation beams in which the beam intensity or energy deposition per unit time (fluence) varies by several orders of magnitude across the face of each beam. It is a cross-firing process that has been compared to computerized tomographic (CT) scanning. CT delivers a uniform radiation exposure to the patient and the nonuniform attenuation of the beam is measured to reconstruct the cross-sectional image. IMRT delivers a nonuniform radiation exposure from multiple angles to create a uniform dose distribution within the tumor.

Knowledge of normal tissue resistance to the effect of radiation is necessary for IMRT planning. When the tumor is not separated from surrounding normal organs at risk (eg, when the target wraps around organs at risk), adding modulation to geometric shaping of the beam may be the best way to adequately treat the tumor while sparing the normal tissue. IMRT joins proton or heavy-particle radiation therapy as ways to deliver the concave dose distributions that will allow for organ-sparing for irregularly shaped tumors and contiguous normal tissues. The beam is segmented into a series of tiny "beamlets," and the fluence of each beamlet is made proportional to the tumor thickness as assessed from the angle that the beamlet traverses the tumor. Where the tumor is thickest, the intensity is at its greatest; where it is thinnest, the intensity is least. By cross-firing the target with beams of varying intensity, a relatively uniform dose distribution can be built up across the volume of the tumor.

IMRT development has depended upon the development of separate but related technologies: 1) fast and inexpensive digital computation for treatment planning, 2) new optimization algorithms to calculate the numbers of beams, their nonuniform fluence, and the beam positions, 3) the new imaging technologies including CT, MR, digital angiography, and PET for tumor localization, 4) patient and tumor immobilization, 5) verification of treat-

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ment delivery (both for accuracy of optimization and fidelity to plan specification), and 6) computer networking to orchestrate all of the above technologies.

There are two candidate IMRT delivery systems. The multi-leaf collimator (MLC) consists of a set of narrow tungsten leaves, projecting 1-cm wide at the center of rotation of the linear accelerator gantry. These leaves can be individually positioned under computer control to shadow portions of the uniform beam during treatment, producing the beamlets required for IMRT. A second system uses a narrow "mini-MLC" that is added to the standard linear accelerator. The beam is turned on and off by driving the mini-MLC leaves to either an open or a shut position. Treatment is delivered to narrow, 2-4 cm slices of the tumor in a rotational fashion. At each rotation, the patient is moved inward, positioning an untreated portion of the tumor for treatment.

Each approach has its advantages. The "standard" MLC can treat the whole patient at once, but currently requires a retrofit of only the most modern accelerators and costs approximately $400,000. The computer planning software for this device is at an early stage in development, and the entire treatment "chain"—from planning to accelerator and from collimator control code to verification—is still in development at a few academic centers. The "mini" MLC can be added to any accelerator, indeed can even be retrofit to a cobalt treatment machine. It is about 1/4 the price of the standard device. The mini-MLC system has been commercialized and is in clinical use at approximately 20 centers in the United States. Since only a portion of the treatment can be delivered at any one time, however, the treatment may take as long as 30 minutes instead of the five to 10 minutes of "beam on" time. Also, exact registration of the slices (the stepwise movement of the patient inward with respect to the treatment beam after each rotation) is critical to avoid overdose or underdose where the slices abut.

Early clinical results have been published for head and neck cancers, for CNS malignancy, and for prostate cancer. Doses in the range of 8600 cGy have been achieved for prostate cancer without increased acute rectal and bladder toxicity, compared with conventional treatment to doses of 6600–7000 cGy. Patients with central aerodigestive-tract malignancy and involved neck nodes have been locally controlled with less xerostomia due to the ability to spare the salivary glands from significant radiation dose. Tumors wrapped around the optic nerve or spinal cord have been treated with therapeutic doses without any degradation of vision or motor function. The Radiation Therapy Oncology Group is currently planning a phase III trial of this modality *vs* conventional treatment. Subsequent to this trial the radiation oncology community may anticipate that technology transfer could occur rapidly, so that the approach will become available to benefit appropriately selected patients with potentially curable local tumors.

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The Future of Teleradiology in Medicine

TELERADIOLOGY allows the viewing of diagnostic imaging studies at a site remote from the imaging location and has historically been used for on-call coverage, particularly of CT and ultrasound. Now, technology and the forces of medicine have combined to develop two new possibilities. One potentially enables any clinician to review, at any location, imaging studies (and reports) of patients under his or her care. The other allows imaging specialists to perform remote primary interpretation.

Initially, most teleradiology systems were quite crude and slow, and often captured image data with only moderate resolution and accuracy. Today, these systems are increasingly connected or integrated to a Picture Archiving and Communication System (PACS), using the Digital Imaging Communication in Medicine (DICOM) standard of the American College of Radiology.

Currently, a combination of increased computing power, including high speed and abundant memory at very reasonable cost, enables the remote display of a more accurate and detailed representation of the original image. Display technology has also improved to the degree that these systems have the capability to view conventional radiographs, in addition to CT, ultrasound, and MR, provided the images are captured at appropriate resolution. Communication technology allows movement of images at greater speed via fast modems, ISDN, and dedicated communication links inside and outside of hospitals. In addition, advances in the area of image compression allow the packing of image data more tightly, which further enhances transmission speed. Compression methods known as *wavelets* appear to allow high compression with no perceptible loss of diagnostic information.

Security for teleradiology is an area that is being addressed, partly in response to new government regulations for patient privacy protection. Teleradiology systems are being used increasingly for remote interpretation, particularly for CT and MR, raising issues of credentialing, licensing, and traditional relationships between referring clinicians and local radiologists. Image transmission and the viewing process are somewhat slower than a dedicated in-hospital PACS, unless similar workstations are used. Projection radiology, ie bone and chest, is technically more challenging.

Most recently the World Wide Web has provided exciting new software solutions to the problem of moving image data. It is in use today at many academic centers. Clinicians can expect to have access to patients' images at any location once this technology is more widely available. Ideally, advanced teleradiology will enable improved diagnostic imaging for underserved populations.

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New Methods of Treatment for Cerebral Aneurysms

THERE is now almost a decade of accumulated clinical experience with the Guglielmi Detachable Coil (GDC) in the treatment of cerebral aneurysms. This represents a major new option in the "minimally invasive treatment" methods now available to patients with cerebrovascular disease and stroke. The basic GDC design consists of a helical platinum coil attached to a stainless steel delivery wire. Under x-ray guidance, the soft platinum coil is positioned within the aneurysm lumen via a microcatheter navigated to the aneurysm neck. Once a satisfactory configuration is attained, the coil is detached from the delivery wire by electrolysis. The objective is to pack the aneurysm with a sufficient number of coils to induce endosaccular thrombosis and occlusion, thus preventing arterial inflow. This technique obviates the need for a surgical craniotomy. Approximately 27,000 patients have undergone this treatment.

The most satisfying technical results are seen in smaller aneurysms (<12-mm diameter) with narrow necks. Wide-necked aneurysms remain technically challenging because of the proclivity of coil loops to cross the broad neck and herniate into the parent arterial lumen. Fusiform aneurysms also remain a challenge because occlusion of the aneurysm lumen usually results in simultaneous blockage of the parent artery.

In addition to factors related to aneurysm morphology, the feasibility of endovascular aneurysm treatment also relates to the aneurysm site. Middle cerebral artery aneurysms are usually more difficult to treat because of more complex anatomical arrangements encountered in this location. For treatment of posterior circulation aneurysms, however, endovascular techniques may offer advantages over surgical clipping because of difficult surgical access and the risk of injury to small arterial perforator vessels and neural structures. Other potential advantages of the endovascular route over surgery are that brain retraction is avoided (especially relevant in acute aneurysms where the brain may be swollen and edematous), and the ability to stage procedures in medically compromised patients with large or complex acute aneurysms.

A longer-term problem associated with the use of GDC is the phenomenon of coil compaction. Over time the endosaccular coil conglomerate may compact, resulting in partial recanalization of the aneurysm, usually at the neck. For this reason, follow-up angiography is necessary. The likelihood of coil compaction may correlate to the density and completeness of the original coil pack, the size of the aneurysm and aneurysm neck, the presence of aneurysm thrombus, and the position of the aneurysm. End-artery locations such as terminal carotid or basilar tip aneurysms may be prone to coil compaction because the direction of the arterial inflow vector is perpendicular to the aneurysm neck, producing a so- called water-hammer effect against the coils.

The largest published series examining the efficacy of the GDC system in treatment of acute subarachnoid hemorrhage is a North American multi-center prospective trial in which 403 patients were enrolled. All of these patients were excluded from aneurysm surgery because of technical difficulty, poor medical condition, or other reasons and therefore represent a high-risk group. The proportion of posterior circulation aneurysms within this cohort was 57%. The overall reported rates of morbidity and mortality were 9% and 6% respectively. These figures compare favorably with the natural history of untreated ruptured aneurysms. The data suggest that GDC embolization in subarachnoid hemorrhage may be less effective in giant aneurysms (>2.5-cm. diameter) and may not improve clinical outcomes in those patients with pre-existent poor clinical status. A European multicenter prospective randomized controlled trial comparing surgery to endovascular treatment of ruptured aneurysms is currently in progress. Rebleeding rates following endovascular coiling remain to be defined. The preliminary data are encouraging, however, indicating an overall rebleeding rate of 0.5% or less per annum. A recent prospective study of clinical outcomes (average of 3.5 years follow-up) found 86% of 61 patients treated with GDC for acute subarachnoid hemorrhage had an excellent or good outcome.

Valid comparisons of morbidity and mortality with surgical clipping in acute subarachnoid hemorrhage, particularly with respect to anterior cerebral circulation aneurysms (and especially anterior communicating artery aneurysms which overall are the most common) are difficult to make using the current data. The results of prospective randomized controlled trials are awaited. Endovascular technology, however, continues to evolve rapidly, as does clinical expertise with these techniques, forecasting further improvement in healing aneurysms using the endovascular route.

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Extracranial Carotid Stenosis: Ultrasound, MRI, Angiography

In experienced hands, with proper instrumentation, vascular ultrasound is the screening study of choice for extracranial carotid artery disease because it is accurate, noninvasive, and the least costly of the three main options. This technique uses bilateral morphologic images to assess the extent of plaque and tortuosity, and to determine whether there is a high carotid bifurcation.

Another essential component is an evaluation of flow dynamics using color Doppler, and spectral analysis in the internal carotid artery, the external carotid artery, the vertebral artery, and the proximal, mid, and distal portions of the common carotid artery.

To assure quality of operator and instrumentation, the sonogram should be done in an accredited laboratory under the supervision of an experienced registered vascular technologist. Laboratory accreditation is obtained through either the Intersociety Commission for the Accreditation of Vascular Laboratories or the American College of Radiology Vascular Ultrasound Accreditation Program.

If the carotid stenosis is greater than 70% and there is no suggestion of other complicating factors, some surgeons will proceed directly to carotid endarterectomy, depending upon whether the sonogram is technically adequate. Others prefer to corroborate the sonogram before surgery with magnetic resonance angiography (MRA), particularly if questions exist. A confirmatory study is important if flow is damped, suggesting bilateral carotid ostial disease (or cardiac disease) out of the field of view of ultrasound that can be visualized by MRA. Other indications for MRA confirmation are detection by sonography of elevated carotid velocities, which may result from shunted flow from a significant lesion of the opposite carotid artery; suspected internal carotid occlusion; or highly resistant flow in a normal-appearing carotid artery, suggesting dissection out of the sonographic field of view.

MRA is also indicated in evaluating for random lesions and to differentiate between vessel occlusion *vs* "angiographic string sign" suspected on ultrasound.

Carotid catheter angiography has historically been the standard to which the other studies are compared. The examination has inherent risks, albeit low, but with potential for morbidity and even mortality. Recent studies suggest that when compared with the actual carotid specimen removed intact at the time of endarterectomy, extracranial carotid artery disease is significantly underdiagnosed by catheter angiography. Angiography, however, remains an integral part of the workup in that small group of patients in which there is a discrepancy between the ultrasound and magnetic resonance angiographic studies.

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Ultrasound *vs* CT in Evaluating Blunt Abdominal Trauma

INJURIES from blunt trauma are primarily the result of motor vehicle accidents, and continue to increase along with motor vehicle use in the United States and worldwide. Rapid diagnosis and early surgical intervention decrease morbidity and mortality from these injuries. To detect intra-abdominal injury from blunt trauma, emergency physicians and trauma surgeons have several options: physical examination, laboratory tests, observation, diagnostic peritoneal ravage, ultrasound, and computerized tomography (CT).

Physical examination and laboratory tests are not accurate in detecting intra-abdominal injury. The presence of abdominal tenderness to palpation is neither sensitive nor specific for intra-abdominal injury, and is unreliable in obtunded or unconscious patients. Patients with multiple distracting injuries will also have unreliable abdomen exams. Laboratory tests indicating fall in hematocrit greater than 5% or abnormal liver function are questionable. Admission to the hospital and observation may be useful in the diagnosis of subtle or occult intra-abdominal injury—including bowel and mesentery injuries—which are notoriously difficult to detect with imaging studies. Admission and observation may also be appropriate for selected spleen and liver injuries for which nonoperative management has been chosen. In the era of managed care and shrinking medical resources, however, the practice of admission for observation is declining.

Diagnostic peritoneal ravage remains the most sensitive method for detecting intra-abdominal injury, and is indicated for obtunded or unconscious patients. The majority of blunt trauma patients treated by emergency physicians are stable and awake, however, and diagnostic peritoneal ravage is inappropriate for this subgroup. It is also an invasive procedure requiring a substantial amount of time and effort, making it difficult for the busy emergency physician to perform alone. It is more appropriate for a trauma center with a dedicated trauma team. A positive diagnostic peritoneal ravage provides no information about the site of bleeding and does not identify isolated retroperitoneal injuries. Because of the extreme sensitivity of this technique, a greater number of nontherapeutic laparotomies have been reported from the use of diagnostic peritoneal ravage as an initial screen for intra-abdominal injury.

Ultrasound has many qualities which make it an attractive initial screening test for intra-abdominal injury. It is portable, rapid, noninvasive, and relatively inexpensive, and it involves no parenteral or oral radiocontrast exposure. It can be performed during the trauma resuscitation. Serial ultrasound examinations are easily obtained.

Reported sensitivities for detection of intra-abdominal injury range from 63% to 100%. There are variations in study design and method of scanning, however. The amount of intraperitoneal fluid required for ultrasound detection remains unclear, but is widely regarded as approximately 500 mL. Although some studies utilize a single scan of the hepatorenal interface (Morison's pouch), which is considered positive if a stripe of fluid is seen, the single view has largely been abandoned, and a more comprehensive sonographic examination has evolved.

Focused abdominal sonography in trauma (FAST) is now the most commonly used method worldwide in the detection of intraabdominal injury. The FAST scan can be completed in less than five minutes and involves up to six views: 1) subxiphoid to detect pericardial effusion; 2) right upper quadrant view to assess Morison's pouch, diaphragm, liver, and kidney; 3) left upper quadrant to assess the splenorenal interface, spleen, diaphragm, and kidney; 4) and 5) right and left flank to assess kidneys; and 6) longitudinal pelvis to look for free fluid adjacent to the bladder. The development of the FAST technique was based on observations of the location of intraperitoneal fluid collections in the supine patient, which were the pelvic cul-de-sac, Morison's pouch, and pericolic gutters. Recent studies comparing the single-view scan to the FAST scan noted significant improvement in sensitivity, specificity, and accuracy with a slight increase in total examination time.

Studies assessing the FAST technique for detecting hemoperitoneum report sensitivities from 63% to 98% and specificities above 90%. Localization of specific organ injuries by ultrasound is less successful, with sensitivities ranging from 44% to 73% for all combined organ injuries. Solid organ injuries, such as spleen and liver, are more accurately identified with ultrasound than bowel and mesentery injuries. Ultrasound has better sensitivity for detecting parenchymal spleen injuries than liver injuries. A negative ultrasound examination cannot completely rule out the possibility of intraabdominal injury. Up to 26% of patients with intraabdominal injury from blunt trauma may have no hemoperitoneum identified on ultrasound or CT.

Ultrasound represents a snapshot in time. Obtaining a repeat ultrasound after a period of time or significant deterioration in clinical status may detect these occult injuries. Further studies are required to answer this question. Some potential disadvantages of ultrasound include variable operator training level and experience, and imaging limitations from obesity, luminal bowel gas, subcutaneous emphysema, and ascites.

CT scanning has been proven to be the ideal imaging study for the detection of intraabdominal injury. Unlike diagnostic peritoneal ravage and ultrasound, it enables localization and grading of specific organ injuries, which are important in determining operative versus nonoperative management. CT also may identify pneumothoraces, fractures of the spine and pelvis, and vascular injuries which may not have been apparent on initial plain radiographs. Multiple studies have demonstrated CT to have sensitivities and specificities consistently above 90%. Yet another advantage is helical CT, which has significantly shorter scanning time. CT, while excellent at detecting solid-organ intraabdominal injury, is less accurate for bowel and mesentery injuries.

Disadvantages of CT include the necessity of intravenous and oral contrast, which expose the patient to the risk of adverse drug reaction. The patient must be transported from the emergency department, so CT is not appropriate for unstable patients. Pediatric patients often require parenteral sedation to successfully complete the CT exam, which requires constant monitoring and carries the risk of airway compromise. CT nevertheless remains the optimal imaging study in the detection of intraabdominal injury.

As emergency physicians and surgeons become more familiar with ultrasound, it will be increasingly utilized as the initial screening tool for detection of blunt intraabdominal injury. The impact of this usage will be decreasing reliance on diagnostic peritoneal ravage. CT will probably be utilized more frequently for initial detection of intraabdominal injury; localization and grading of intraabdominal injury for positive ultrasound exams; and confirmation of negative ultrasound exams. CT will also be used to determine which patients require admission and which may be safely discharged home from the emergency department.

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Imaging Renal and Ureteral Stones

PATIENTS with renal or ureteral stones usually seek medical attention for renal colic. Passage of a ureteral stone is often accompanied by some degree of obstruction of the ipsilateral ureter and/or renal collecting system. Intravenous urography (IVP) has long been the gold standard in evaluating these patients. It may confirm that a suspected calculus demonstrated on a plain radiograph lies within the ureter and determine the presence and degree of obstruction. IVP can also detect obstruction secondary to nonradiopaque stones. Intravenous urograms, however, can be time-consuming and may require delayed imaging up to 24 hours after the initiation of the study. In addition, IVP requires the use of iodinated contrast material, to which a small but significant number of patients are allergic. Iodinated contrast can also be nephrotoxic, especially in patients who have renal insufficiency.

Recent studies have demonstrated the superiority of noncontrast helical computed tomography (CT) over IVP in evaluating patients presenting with acute flank pain. The advantages of CT include its rapid acquisition times; the fact that it is performed without the use of iodinated contrast or patient preparation; and its high sensitivity and specificity in detecting renal and ureteric stones and ureteral obstruction. Traditionally, the cost of an abdominal pelvic CT scan is greater than that of an IVP, but varies from one institution to another. However, since the CT study used for imaging renal and ureteral stones does not require oral or intravenous contrast, some institutions charge for a limited CT scan and have lowered the cost of the CT study to equal or compare favorably to the cost of an IVP. CT may also diagnose other disease entities unrelated to the genitourinary tract, which may be responsible for a patient's flank pain.

Noncontrast helical CT has been shown to be quite sensitive and specific in the detection of renal and ureteric stones. A recent study found that CT detects obstructing ureteric calculi with a sensitivity of 98%, a specificity of 100% and positive and negative predictive values of 100% and 97% respectively. In a direct comparison of noncontrast helical CT, ultrasound and IVP in the detection of ureteral stones, CT was found to be the superior of the three modalities. The sensitivity and specificity of CT was 94% and 97% respectively with an accuracy of 95%, whereas IVP had a sensitivity and specificity of 52% and 94% respectively and an accuracy of only 66%. Ultrasound was the inferior of the three modalities and had a sensitivity and specificity of 19% and 97%, and an accuracy of 45%. Stones may be visualized within the renal pelvis and intrarenal collecting system, in the ureter, at the ureterovesicular junction, and in the bladder. Obstruction due to a ureteral stone may result in a number of associated findings on noncontrast helical CT. These include enlargement of the affected kidney, perinephric stranding or edema—which may be visualized as linear areas of increased density within the fat surrounding the kidney—and dilatation of the intrarenal collecting system and ureter to the level of the intraureteral stone. The presence of unilateral ureteral dilatation and perinephric stranding has been shown to have a high positive predictive value for the presence of stone disease (99%), whereas the lack of these two findings has been shown to have a high negative predictive value in excluding stone disease (95%). Once a ureteral stone has been identified, the level of the obstruction can easily be determined. The size of the stone can be accurately measured using helical CT. Furthermore, nearly all stones are visualized regardless of stone composition, since even uric acid stones are greater in density than soft tissue and therefore easily detected by CT. The axial images obtained during a noncontrast helical CT of the abdomen can be reformatted to create coronal images similar to those obtained during an intravenous urogram. These can be used to enhance communication between the radiologist and the referring clinician.

Occasionally, phleboliths within the pelvis along the course of the ureter may be confused with a ureteral stone. A rim of soft tissue around a suspected calculus has a 31-to-1 odds ratio of representing a ureteral stone as opposed to a phlebolith. Reformatted coronal images may also be useful in demonstrating the relationship of a pelvic calcification to the ureter.

Ultrasonography has also been used to evaluate patients presenting with acute flank pain. When ultrasonography is utilized, the detection of hydronephrosis and/or hydroureter is used to determine whether or not obstruction is present. Ultrasound, however, may fail to detect hydronephrosis within the first 24 hours. Ultrasound is also operator-dependent, and quite often visualization of the ureter and site of obstruction can be limited. In a comparison of noncontrast helical CT to the combination of plain film and ultrasound, noncontrast CT was found to be superior in detecting ureteral calculi and perinephric fluid.

In many cases, acute flank pain may be caused by disease entities unrelated to the genitourinary tract. In these cases, one would expect an intravenous urogram to be normal. More recent studies have demonstrated that noncontrast helical CT is quite useful in determining other disease entities which may account for the patient's flank pain. These include diseases of the bowel, such as diverticulitis or appendicitis, or other disease entities such as pancreatitis, adnexal masses, or leaking abdominal aortic aneurysm.

The radiation doses received by the patients undergoing noncontrast helical CT can be similar to that of intravenous urography (depending on the number of radiographs obtained for the IVP). Noncontrast helical CT, unlike intravenous urography, does not give information about renal function. It has been suggested by some authors that the degree of obstruction and renal dysfunction may be proportional to the amount of perinephric stranding and fluid present on noncontrast helical CT. In many institutions, since noncontrast helical CT does not require oral or intravenous contrast material or patient preparation, the cost of the helical CT is reduced to compare favorably with that of the intravenous urogram.

In summary, noncontrast CT has been shown to be superior to intravenous urography in the detection of renal and ureteric stones; in determining the degree and level of obstruction; and in offering alternative diagnoses to account for the patient's flank pain if no stone is present. Noncontrast helical CT can be performed quickly and without patient preparation. Since intravenous contrast is not used, there is no risk of allergic reaction or nephrotoxicity. Noncontrast helical CT may be considered the modality of choice in evaluating patients presenting with acute flank pain.

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Management of Locally Advanced Prostate Cancer: New Definitions and Strategies

UNTIL the mid 1990s, the term "locally advanced prostate cancer" referred to a stage of prostate cancer determined by digital rectal exam to have palpable evidence of cancer penetrating the capsule of the prostate. This definition was challenging from its inception and with time it has become even less useful. Prostate cancer at this stage, also called stage "C" or "T3" disease, was associated with a 30% to 50% likelihood of lymph node involvement, and most radiation oncologists and many urologists considered such patients unsuitable for a radical prostatectomy. Such patients were usually treated with radiotherapy alone, and it was widely believed that the local control rate approached 70%.

Recent studies have demonstrated that the clinical extent of disease determined by palpation does not provide the most critical information for determining lon-gterm prognosis. The availability of the serum marker prostate specific antigen (PSA) in the late 1980s is largely responsible for recognition of the shortcomings of the traditional definition of locally advanced prostate cancer. With the availability of the PSA, it became clear that many patients who would previously have been declared "cured" did in fact have active disease.

Based on contemporary criteria for what really should be considered locally advanced disease, locally advanced prostate cancer is quite common. These criteria include cancers with a high likelihood of not being organ-confined at the time of surgery, and cancers with a high rate of local failure with standard-dose radiotherapy. Until very recently, most surgical studies demonstrated that nearly half of all patients with clinical stages below T3 who were treated with radical prostatectomy were found to have cancer extension beyond the capsule (pathological T3 disease).

Studies evaluating the local status of the disease using biopsies demonstrated that local failure was the rule and not the exception for patients with bulky tumors. Because of sampling errors (false-negative biopsies), the true incidence of local failure is probably underestimated considerably. A rising serum PSA appears to be the most sensitive way to define disease status, thus PSA has become the gold standard for treatment failure.

Despite the value of the PSA as a tumor marker, it appears that tumor grade and stage are better predictors of prostate cancer mortality. The most widely accepted (and respected) grading system was described by Gleason. Total Gleason-pattern score—a sum of the two most common histologic patterns—correlates with pathologic stage and survival and cancer-specific survival. When matched for pretreatment PSA, patients evaluated by Gleason score compared with T stage appeared to do equally well (or poorly) when treated with either radiotherapy or surgery. The independent thresholds for a poor outcome appear to include a pretreatment PSA >10 ng/ml, Gleason score >7 and clinical stage >T3. Patients possessing two or more of these factors should be considered to have locally advanced disease. Unfortunately, sampling errors and errors arising from inaccurate readings by pathologists have been reported to compromise the accuracy of Gleason-score readings in community hospitals.

In the mid to late 1980s, because of high local failure rates for high-risk patients treated with conventional doses of radiotherapy, computer-based treatment planning focused on the development of "three-dimensional conformal radiotherapy" (3DCRT). This technology allowed a reduction in the dose of radiation delivered to surrounding normal tissues while higher doses were delivered to the prostate. Several retrospective studies have now demonstrated both a reduction in the acute toxicity and an improvement in PSA responses with the use of higher doses in some patients. Despite these encouraging impressions, however, only prospective randomized trials will prove that higher doses are safe and more effective at achieving local control as well as freedom from disease and improved chances for overall survival.

Experimental and clinical data suggest that there may be synergistic interactions between androgen suppressive hormonal therapy and radiation. Recent prospective randomized trials have shown that the use of neoadjuvant (before and during) hormonal therapy is associated with an improvement in local control and disease-free survival. Other studies demonstrated a progressive reduction in the incidence of positive biopsies when hormonal therapy is added to radiotherapy. Two more recent studies provide evidence of a survival benefit when adjuvant hormonal therapy is added to radiation.

Based on the best available data, Gleason score >7 (tumor grade), and high serum PSA (> 10 ng/ml) as well as T stage should be used to define high-risk or locally advanced prostate cancer. The benefits of higher doses of radiation need to be confirmed in prospective randomized trials, but improved CT-based imaging (3D conformal radiotherapy) is probably here to stay. Patients with several poor-risk factors, including clinical stage >T3, Gleason score >7 and/or PSA >10 ng/ml, should probably be managed with androgen ablation lasting one, two, or even three years or longer in addition to radiotherapy.

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Optimizing the Use of ACE Inhibitors in Patients with Congestive Heart Failure

JAMES P. TSIKOURIS, PHARM.D.

Introduction

IN the past two decades the mortality associated with stroke and coronary artery disease has decreased due to the improvement in treatment modalities.[1] However, because of the direct relationship between advancing age and the prevalence of chronic heart failure, the aging U.S. population has produced an increasing number of patients with heart failure. An estimated four million people in the U.S. have chronic heart failure, with 400,000 new cases diagnosed annually.[2,3] Over 875,000 hospitalizations each year are due to heart failure,[4] with the mortality rate estimated to be 80% for men and 65% for women six years after diagnosis.[5]

The development of angiotensin converting enzyme (ACE) inhibitors has provided a major advancement in the management of chronic heart failure. Large clinical trials evaluating the utility of ACE inhibitors have demonstrated a decrease in symptoms, hospitalizations, and mortality in patients with left ventricular (LV) systolic dysfunction (ejection fraction < 40%), regardless of New York Heart Association (NYHA) functional class. These findings suggest that all heart failure patients with LV systolic dysfunction deserve a trial of an ACE inhibitor. However, the observed mortality benefits of ACE inhibitors in clinical practice are less apparent than observed in clinical trials, presumably due to the variations in prescribing patterns among physicians. This article will review the factors that impact on underutilization and suboptimal dosing of ACE inhibitors.

Underutilization of ACE Inhibitors in Congestive Heart Failure (CHF)

Despite favorable evidence, clinical surveys suggest that only 30% to 60% of patients with heart failure (excluding those with contraindications) are prescribed ACE inhibitors.[6] One retrospective study found that elderly patients are less likely to be prescribed ACE inhibitor therapy than younger patients when discharged from the hospital (49.6% *vs* 58.9%).[7] Another group of investigators found that only one third of all heart failure patients presenting to acute care hospitals had been receiving ACE inhibitors on admission.[8] More recently it was found that ACE inhibitor use in heart failure patients prior to hospital admission has risen from 39% in 1992 to 53% in 1998. The same investigators reported an increase in ACE inhibitor prescribing at hospital discharge from 51% to 64% over the same time period.[9] While this increase in use is promising, it still remains below the 80% to 90% rates of drug tolerance documented in large randomized clinical trials.[10-13]

The studies discussed above found that younger patient age, lower ejection fraction (EF), and lower serum creatinine most likely correlated to ACE inhibitor use in CHF patients with LV systolic dysfunction. The Agency for Health Care Policy and Research (AHCPR) guidelines for heart failure suggest that all patients with CHF due to LV systolic dysfunction (EF<40%) should be started on an ACE inhibitor unless one of the following contraindications exists: 1) history of intolerance or adverse reaction, 2) serum potassium >5.5meq/L that can not be reduced, or 3)

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symptomatic hypotension. Elevated serum creatinine or increasing age are not contraindications for use. These patients may be more sensitive to ACE inhibitor therapy, and more conservative management with lower dosing and close monitoring is recommended. Therefore, physicians should be prescribing ACE inhibitor therapy to all patients with LV systolic dysfunction if there are no contraindications.

Underdosing of ACE Inhibitors in CHF

Even though the use of ACE inhibitors is increasing, the issue of adequate dosing is still a concern. For heart failure patients in which ACE inhibitors are prescribed, recent surveys suggest the doses used are 10% to 25% of the doses used in large clinical trials[6] (Table 1). For example, the heart failure trials evaluating captopril therapy used doses of 150 mg daily,[10] where in clinical practice the prescribed daily dose is seldom greater than 50 mg to 75 mg daily. Despite the lack of evidence demonstrating similar clinical benefits with the use of low-dose *vs* high-dose ACE inhibition, patients are commonly prescribed low doses of ACE inhibitors. A number of factors are thought to be responsible for the common practice of suboptimal dosing of these agents in patients with heart failure. Profound hypotension, hyperkalemia, significant compromise in renal function, and persistent cough can occur with the use of ACE inhibitors. However, the incidence of these adverse events are rare and clinical trials have shown ACE inhibitors to be well tolerated even at high doses.[10-13] If these adverse events do occur then using lower doses or discontinuing the ACE inhibitor is reasonable. Adverse events can have an impact on the use of any pharmacologic agent, however there are other factors which significantly limit the dosing of ACE inhibitors in heart failure patients.

In clinical practice physicians commonly use surrogate markers to determine the effectiveness of a particular pharmacologic intervention. In patients with heart failure, physicians monitor the hemodynamic and symptomatic response to evaluate the effectiveness of ACE inhibitor therapy. Therefore, patients with a modest decrease in blood pressure or reduction in heart failure symptoms with low-dose ACE inhibitor therapy are often maintained at that dose, possibly due to the assumption that the patient is receiving the survival benefit of the drug.[6] However, there is no current clinical data to demonstrate that improvement in symptoms correlates with the mortality benefit observed with ACE inhibitor therapy. The symptomatic response to ACE inhibitors is most likely due to the hemodynamic effects of these agents, which are observed at low doses. On the other hand, mortality benefits are believed to be a result of optimal neurohormonal effects of the drug. Maximal effect on the neurohormonal system occurs with high-dose ACE inhibitor therapy.[14] Also, in clinical trials patients who received placebo had an improvement in their symptoms of heart failure without an observed benefit on survival.[15] A finding which indicates that subjective evaluation of symptomatic improvement does not directly correlate with survival benefit. Recent surveys continue to suggest that physicians often use hemodynamic response (blood pressure) and symptomatic improvement to guide therapy.

Table 1.—Heart Failure Studies
with ACE Inhibitor Therapy

Trial	Drug	Daily Target Dose
CONSENSUS	Enalapril	40 mg
SOLVD	Enalapril	20 mg
V-HeFT II	Enalapril	20 mg
SAVE	Captopril	150 mg
AIRE	Ramipril	10 mg

The same recent surveys suggest many clinicians feel that using low-dose ACE inhibition provides morbidity and mortality benefit while minimizing the risk of adverse events.[6] This assumption may be the major reason for suboptimal dosing in patients with heart failure. As stated earlier, the large heart failure trials used high target doses, and definitive survival data with low-dose ACE inhibitors is currently unavailable. Also, the frequency of side effects observed with both high- and low-dose ACE inhibitor therapy were similar.[16,17] Thus it appears that high-dose ACE inhibitor therapy can be used in most patients with heart failure to optimize survival benefit.

Conclusion

Contraindications to ACE inhibitor therapy, concerns of significant hypotension and renal compromise are all valid reasons for not using ACE inhibitor therapy in patients with congestive heart failure. However, most patients (including the elderly) can tolerate high target doses if gradual titration is used. Currently there is no evidence proving mortality benefits with low- dose ACE inhibitor therapy in CHF patients with LV systolic dysfunction. A large randomized trial (ATLAS trial) comparing low- *vs* high-dose ACE inhibitor therapy is currently ongoing. Until definitive data demonstate that low dose ACE inhibitor therapy has mortality benefit, clinicians should use target doses from clinical trials with established outcomes to guide dosing of ACE inhibitors for heart failure patients with LV systolic dysfunction.

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The HUSKY Program:
An Opportunity to Insure Connecticut's Children

KRISTIN MATTOCKS, M.P.H.

ABSTRACT.—Uninsured children in Connecticut represent a diverse group, and insuring them is a monumental task. In August 1997, President Clinton signed into law the Children's Health Insurance Program, which provides $47 billion in funds to states over the next 10 years to insure the nation's low-income children. Connecticut has been a leader in modeling the federal Children's Health Insurance Program into action. Connecticut's version of the program, Healthcare for UninSured Kids and Youth, (HUSKY), was enacted over the summer, and, to date, has enrolled over 4,000 children in the program. Connecticut's HUSKY program provides a timely opportunity for the state, as well as community health centers and other primary-care facilities, to reach those uninsured children in Connecticut's communities and move the children into the HUSKY program. In order to achieve this goal, innovative outreach strategies need to be designed that utilize cultural and community resources to locate and insure these children.

Background

FALL signals the beginning of another school year in Connecticut, and, as in every year, thousands of children are returning to school on buses and bikes without health insurance coverage. Over the summer, in a statewide campaign to remedy this problem, Connecticut initiated a new health insurance program for low-income children, and named it, appropriately, HUSKY (Healthcare for UninSured Kids and Youth). The HUSKY program is the Connecticut version of the national Children's Health Insurance Program (CHIP), which will provide $47 billion over the next 10 years for children's health-care coverage. Connecticut's version of CHIP provides health insurance to children who have traditionally not qualified for Medicaid because they come from families whose incomes are too high to qualify, but which are often too low to afford private health insurance.

The HUSKY program includes both Medicaid coverage for children and insurance coverage based on the state employees benefit plan. The Medicaid portion of HUSKY is referred to as Part A, while the insurance program is referred to as Part B. Both HUSKY Part A and B utilize contracted services through managed-care plans. HUSKY part A reflects Medicaid coverage for children ages 0 to 18 in families with incomes up to 185% of the federal poverty level (FPL). For HUSKY part B, the program only covers children with family incomes between 185% to 300% of the FPL. Children enrolled in HUSKY B with family incomes between 185% and 300% of the FPL are also able to apply for HUSKY Plus, a supplemental health coverage for children with special behavioral or physical needs. The HUSKY Plus benefits provide expanded coverage through contracts with Connecticut Children's Medical Center in Hartford, and the Department of Pediatrics at the Yale University School of Medicine in New Haven.

Benova, the enrollment broker for the HUSKY program, has made application to the program accessible by instituting a toll-free number that parents can call to receive information or apply for the program over the phone. In addition, Healthy Start, Department of Social Service (DSS) regional case workers, outstationed DSS staff, and community health centers have been trained to assist families with completing the HUSKY applications on a one-on-one basis. Once applications reach Benova,

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they are reviewed and evaluated according to a set of eligibility criteria. Applicants whose family income falls below 185% of the FPL are forwarded to DSS and processed as HUSKY A beneficiaries. Although many in the state expected HUSKY B applications greatly to outnumber HUSKY A applications, in the two months since the program's inception, the number of applications and approvals for both programs have been almost the same. As of late October, the HUSKY program had approved more than 4,000 applications for the program. Two thousand of the applications were for HUSKY B, while 2,160 were for the Medicaid portion of the program, HUSKY A. Altogether, Benova has received nearly 7,200 applications for the HUSKY program thus far, and has denied 1,300 applications. Reasons for denial included incomplete applications, other medical insurance coverage, current HUSKY A coverage, and failure to return documentation.

The ultimate success of HUSKY—how many uninsured children are able to obtain care—depends on innovative and extensive outreach strategies to reach these children. The simplified application process allows families to apply to HUSKY A and B simultaneously. The state of Connecticut is in a key position to capitalize on a crucial opportunity to reduce the number of uninsured children in the state. It is estimated that of the nearly 90,000 children in Connecticut who are uninsured, approximately 52,000 of them already qualify for Medicaid services but are not enrolled. The HUSKY program should serve as a monumental opportunity for community health centers and other primary-care practices to reduce their uninsured populations. These organizations have the opportunity to begin to move large numbers of uninsured children who previously may have had family incomes too high to qualify for Medicaid or were simply lost in the system into the HUSKY program. Such an effort will provide community health centers and primary-care practices with a boost in reimbursement for medical services to children, which is becoming even more vital as the country edges closer to phasing out the federally qualified health center (FQHC) reimbursement by the year 2003.

Outreach Strategies

One community health center that has realized the opportunity to insure its young patients in the HUSKY program is Fair Haven Community Health Center (FHCHC). FHCHC is located in a medically underserved area of New Haven that is geographically isolated from the major health-care centers in the area. Sixty percent of Fair Haven's patients receive some form of public insurance, while another 20% are uninsured. On average, patients receiving care at the Center have a fourth-grade reading level, and over 50% of the patients are Spanish-speaking. Community-based outreach efforts are especially important within the health center because over 80% of the patients receiving care at the health center reside in the Fair Haven community.

In order to design a successful outreach program at the community health center, it was important to consider the target audience. Bilingual HUSKY educational material that would appropriately fit the reading level of those visiting the health center was an absolute necessity. In an effort to reach the largest number of people living in the community as inexpensively as possible, it was important to design creative methods that asked the question, "Where will we find uninsured kids and parents?" A logical place to start seemed to be the three large housing projects located in Fair Haven. Armed with orange bilingual flyers in hand, FHCHC outreach staff went to every door in each project, explaining the program, and taking along applications so the outreach staff could assist people with completing the application form. Misconceptions about health insurance abounded. Often, FHCHC staff would ask an adult if her child had health insurance, and while filling out the application, after assuring us that her child did not have health insurance, the individual would casually remark that the child only had "CHN or Blue Cross." Further problems arose when outreach staff failed to explain the program clearly enough and a group of middle-aged women, seeking solace in the shade of a tree, were convinced that the group was selling life insurance to them so their children wouldn't have to pay for their parent's funerals. Outreach activities were certainly more effective and much more enjoyable when the outreach team enlisted a group of young girls to take them around one of the projects and point out places that children lived. A visit from the ice cream truck at the end of the day was a reward for both outreach workers and children.

Outreach efforts were expanded to include downtown Fair Haven. Banks, grocery stores, hair salons, restaurants, pharmacies, and laundromats were given large batches of flyers for their customers. No opportunity should be overlooked in outreach efforts. Movie theatres, childrens' shoe stores, malls, game rooms, concerts, local newspapers, town meetings, church organizations, and child-care providers are all important venues where effective, culturally-appropriate outreach can take place. Particularly at this time of year, outreach efforts that involve schools, including sporting events, parent-teacher conferences, school open-houses, etc. should be especially strong targets to insure as many children as possible.

The business owners in the Fair Haven community have taken a strong step forward in supporting the HUSKY program. In an attempt to announce the HUSKY program at the busiest intersection of Fair Haven, the branch manager of the local BankBoston in Fair Haven was asked if she would finance a large banner to hang on their building proclaiming "BankBoston supports the HUSKY program at FHCHC!" With a big smile, the branch manager promised to check into it but also suggested a "HUSKY Day" at BankBoston in the meantime. In an outstanding effort of community support, BankBoston not only advertised the event on behalf of Fair Haven, but set up a table in their lobby and provided popcorn, juice, face painting, and a carnival-like atmosphere while FHCHC staff assisted bank customers in filling out HUSKY applications. A pharmacy in Fair Haven has made special efforts to distribute HUSKY information material, while a local pizza delivery shop has agreed to let FHCHC attach HUSKY fliers to their pizza boxes. Finally, outreach staff from FHCHC were invited to Citizens Television to discuss the HUSKY program and reach out to the community via television.

Problems and Recommendations

Despite outreach efforts, however, some children will remain uninsured. At Fair Haven Community Health Center, a large number of uninsured children are illegal immigrants from other countries, and, therefore, do not qualify for health insurance. Even though many children of immigrants were born in the United States, parents often do not realize that their children do qualify for health insurance and therefore are not enrolled in Medicaid, although they may be financially eligible. Furthermore, fear of government institutions and immigration officials keep many parents with HUSKY-eligible children away from government-sponsored insurance.

A particularly difficult segment of the HUSKY population to insure is teenage girls. Many of these girls visit health-care providers without their parent's knowledge in order to receive family planning services. Oftentimes, health centers are strictly instructed by the young women never to call her home or send her anything in the mail. Since the HUSKY applications require a parent's signature, many of these teens will remain uninsured unless inventive outreach strategies or policy alternatives are found. Furthermore, many parents are not aware that traditional children's health programs have been extended (both by age and income) to include larger numbers of children and adolescents than were previously insured. Special outreach and marketing efforts must be designed to insure the teen segment of the population; if even to receive a year or two of preventative health-care services before they turn 19.

Connecticut is well on its way to reducing the number of uninsured children in the state. Local outreach efforts by community health centers, Healthy Start programs, and primary-care centers must continue to reach into the segments of their populations who have been either unaware or unresponsive to previous children's health initiatives. Although large state-wide efforts will certainly have more money, staff, and resources to reach the broadest number of children, community-based organizations must not miss the opportunity to assist their patients in receiving the most comprehensive health services available to them.

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Physicians Health Services (PHS) announced it recently signed a new agreement with the Connecticut State Medical Society Individual Practice Association (CSMS-IPA) to provide health care services for more than 560,000 PHS members. The CSMS-IPA is the largest health care network in Connecticut with over 7,000 participating physicians and other health care providers.

"Known for its high member and physician satisfaction, the CSMS-IPA will work closely with us to design, refine and carry out practices that meet the needs of our members," said Karen A. Coughlin, president and chief executive officer of PHS.

"PHS remains firmly committed to working with the local provider community to offer high quality and affordable health care to our growing membership," This agreement signals the beginning of a partnership that ensures that all members of PHS will have access to the largest organized medical group in the state," she added.

"The CSMS-IPA's ideals of full physician participation and open access match well with the product PHS offers in Connecticut. Physician control of patient care is guaranteed as we work together to provide high quality, cost effective medical care to our patients," said David Thompson, M.D., president of CSMS-IPA.

Additional information about PHS is available on the Internet at www.phshmo.com or you may contact: Alice Ferreira (PHS) at (203) 225-8836 or Paul Lehmann (CSMS-IPA) at (888) 519-8883.

Commentaries

The Plaintiff's Expert

My introduction to expert testimony came during a medical malpractice lawsuit which involved a boy who lost a testicle from torsion. When I first met the child he related a history of 12 hours of scrotal pain. I believed that he could not have torsion of the testicle because his testicles were nontender, were of normal size, and were in normal position. In addition, he had symmetric blood flow on doppler scan, bilateral cremasteric reflexes, and normal echogenicity of the testicles on ultrasound. His history of continuous and nonfluctuating pain did not suggest intermittent torsion. Two days after my initial contact with the child he awoke with the acute onset of left testicular swelling. Despite emergency exploration he had infarction of the left testicle from torsion.

The plaintiff's expert agreed that the child did not have torsion of the testicle when first evaluated. His theory of negligence was that I had failed to act on the "possibility if not probability" that the child was in "remission from intermittent partial torsion" when first seen. He opined that the child should have been examined every two hours so that I would have been poised to operate even more rapidly when he developed torsion two days later.

The expert testified without attempting accurately to ascertain the patient's clinical history or radiographic findings. While he acknowledged that the patient's history is the most crucial factor in making the diagnosis of intermittent testicular torsion, he could not explain why he thought the child had had intermittent pain suggestive of intermittent torsion. He had not spoken to the child nor read his deposition and he was unaware that his description of the plaintiff's history contradicted the plaintiff's own testimony. He admitted that he had never seen nor heard of a case of intermittent torsion in an individual with continuous pain.

On the basis of what should have been an obvious typographical error in the child's ultrasound report, the expert incorrectly believed that the left testicle was massively swollen at the time of my first evaluation. The radiologist's report indicated that the testicles were "normal in size" but included the measurement of "11 cm" for the length of the left testicle. The plaintiff's expert could not detect an internal inconsistency in the report. He testified that he did not know how large a child's testicles should be and therefore he could not disagree with the radiologist's conclusion that the testicles were sonographically normal. Nevertheless, based on his "suspicion" that the left testicle was swollen to the size of a grapefruit he believed that I should have recognized that it might have been transiently torted the night before. He refused my attorneys plea that he actually examine the ultrasound films which demonstrated that both testicles measured 4.8 cm in length.

My defense was straightforward and sincere. Despite the outcome, I had done my best in a case which defied a simple explanation even with the advantage of hindsight. I had seen the child immediately and had considered all diagnostic and therapeutic possibilities. I cared for the child in what I believed to be his best interest. In short, as a practicing physician, I had acted in good faith. I was found innocent of negligence by the jury.

During my two-week trial I had time to ponder the misconception that has been cynically promulgated by plaintiff attorneys that a wall of silence among physicians prevents meritorious medical malpractice lawsuits from being pursued. What I observed was a fellow physician who was so eager to testify for the plaintiff that he did not bother first to determine the most basic facts of the case. The only reservation expressed by the expert came during a break in his lengthy deposition when he angrily blurted out, "I knew it was a mistake to do this for a flat fee ($1,500). I should have charged by the hour."

Following my trial I was astonished to learn that Connecticut state law should have prevented an attorney from suing me without a competent review of the case. State statute S 52-190a requires that a "reasonable" and "good faith" review be conducted by a "similar health-care provider" prior to the filing of a medical malpractice suit and it stipulates that the reviewer must have found evidence of negligence on the part of each defendant.

> **Sec. 52-190a. Prior reasonable inquiry and certificate of good faith required in negligence action against health care provider.** (a) No civil action shall be filed to recover damages resulting from personal injury or wrongful death occurring on or after October 1, 1987, whether in tort or in contract, in which it is alleged that such injury or death resulted from the negligence of a health care provider, unless the attorney or party filing the action has made a reasonable inquiry as permitted by the circumstances to determine that there are grounds for a good faith belief that there has been negligence in the care or treatment of the claimant. The complaint or initial pleading shall contain a certificate, on a form prescribed by the rules of the superior court, of the attorney or party filing the action that such reasonable inquiry gave rise to a good faith belief that grounds exist for an action against each named defendant. For purposes of this section, such good faith may be shown to exist if the claimant or his

> attorney has received a written opinion, which shall not be subject to discovery by any party except for questioning the validity of the certificate, of a similar health care provider as defined in section 52-164c, which similar health care provider shall be selected pursuant to the provisions of said section, that there appears to be evidence of medical negligence. In addition to such written opinion, the court may consider other factors with regard to the existence of good faith. If the court determines after the completion of discovery, that such certificate was not made in good faith and that no justiciable issue was presented against a health care provider that fully cooperated in providing informal discovery, the court upon motion or upon its own initiative, shall impose upon the person who signed such certificate, a represented party or both, an appropriate sanction, which may include an order to pay to the other party or parties the amount of the reasonable expenses incurred because of the filing of the pleading, motion or other paper, including a reasonable attorney's fee. The court may also submit the matter to the appropriate authority for disciplinary review of the attorney if the claimant's attorney submitted the certificate.
>
> (b) Upon petition to the clerk of the court where the action will be filed, an automatic ninety-day extension of the statute of limitations shall be granted to allow the reasonable inquiry required by subsection (a) of this section. This period shall be in addition to other tolling periods.

The historical reason for the adoption of the so-called "good faith statute" in 1987 was the observation that malpractice plaintiff's attorneys in Connecticut were losing 74% of all cases taken to a jury verdict.[1] The image of a judicial system in which staggering amounts of time and money were being spent on the defense of health-care providers who were ultimately judged to be innocent of the charges could not be ignored. The statute was an ill-fated attempt by the state legislature to bring some semblance of quality control to this area of tort law.

I wrote to the judge who had heard my case and expressed my belief that the plaintiff's attorney had violated my rights as a physician by pursuing a lawsuit which mocked the intent of state statute S 52-190a. I asked him to require the plaintiff's attorney to reimburse my insurance company for the cost of my defense ($62,000). At a hearing on my request, the plaintiff's attorney testified that he had obtained a valid review before initiating his lawsuit. He refused to produce it, however, on the grounds that it would have a "chilling effect" on tort litigation if plaintiff attorneys were actually required to demonstrate good faith.

The judge ruled that I had incorrectly asked for validation of the good faith review after the trial rather than before and he determined that the plaintiff's attorney had demonstrated good faith simply by finding a physician to testify against me. He noted that the plaintiff's attorney "is not expected to apply medical knowledge to the opinion he has received, nor evaluate the soundness of the opinion." I concluded from this encounter that while jurors are ultimately expected to possess the good judgment and common sense required to evaluate the soundness of expert testimony, our courts do not expect the same qualities from plaintiff attorneys. The unmistakable irony is that a judicial system which has been entrusted by society to judge the quality of the medical practice of physicians has entirely abdicated its responsibility to control the competence and honesty of the individuals who make the allegations of medical malpractice.

I was surprised to find that the plaintiff's expert in my case possessed significant academic credentials. He had been the director of a residency program at a medical school, and he still maintained teaching positions at several renowned New York hospitals. My attorney explained that the plaintiff's expert was frequently hired to testify against other doctors because, regardless of the inane content of his testimony, his association with illustrious medical institutions gave him a veneer of credibility with jurors.

As evidence that the outrageous expert testimony in my case was not simply an aberration, I recently reviewed a malpractice case in which it was alleged that a urologist and a family practitioner from Connecticut should have made the diagnosis of prostate cancer in a man who was seen in January 1989 with a prostate gland that was enlarged and slightly asymmetric but which was felt to have a benign consistency. A family practitioner from Alabama, who has served as an expert in approximately 100 medical malpractice lawsuits, testified on behalf of the plaintiff that a PSA level should have been obtained and that a slight elevation in the patient's serum gamma globulin level should have alerted the physicians to the diagnosis. His literature search regarding the efficacy of PSAs in diagnosing prostate cancer began with articles from *Time* and *Business Week* in 1991. When asked if he knew what the standard of care was for diagnosing prostate cancer in the 1980s he responded that he found the question "demeaning." When pressed for an appropriate answer, he finally admitted, "I have no opinion." He charged $400 per hour for his testimony.

It is disappointing that judges have failed to understand that careless and dishonest expert testimony represents a form of contempt for our courts. As noted by Peter Huber in his book, *Galileos's Revenge: Junk Science in the Courtroom,* judges have generally refused to control experts even when their testimony is egregiously incorrect. The result is an undignified Wild West atmosphere in our courts in which trial attorneys battle each other with experts who are known in legal parlance as "hired guns."

What is even more disappointing is that the medical community has virtually done nothing to control or even peer review the medical-legal testimony of physicians. While several anecdotal reports document ill-conceived testimony by physicians serving as experts,[2-9] I was unable to find evidence in the medical literature of any systematic study of the problem nor any articles proposing practical methods for controlling those in our profession who repeatedly sell unreliable testimony.

As physicians, we would like to blame unprincipled lawyers and misguided juries for the frivolous and unfounded lawsuits which not only are filed but which sometimes are richly rewarded. Every time that we complain about a medical malpractice lawsuit, however, we should remind ourselves that a fellow physician has accepted a substantial amount of money for the sale of a critical opinion. We should have zero tolerance for physicians who out of greed, malice, or ignorance are selling outlandish opinions in our courts.

There are at least two practical solutions to the problem of dishonest and incompetent testimony. The first approach is to hold the medical organizations and institutions to which the expert belongs responsible for supervising the expert. Following my trial I wrote to the CEO of the teaching hospital in New York where the plaintiff's expert had held his deposition and pointed out that the expert was conducting an extensive testimony business from his office on hospital property. I expressed my belief that the medical center bore responsibility for the lack of supervision of its staff member who had demonstrated profound intellectual deficits during his testimony. I received a reply from a hospital attorney assuring me that the plaintiff's expert had been warned that the use of hospital property as a site for the sale of testimony was a violation of institutional policy and that he had been instructed to cease immediately this activity.

The second approach is to have a peer review board sponsored by the Connecticut State Medical Society evaluate all testimony which has been offered during medical malpractice litigation in our state. The testimony could be judged by a panel of reputable physicians as to whether all pertinent information was studied by the expert prior to developing an opinion, whether the conclusions developed by the expert were reasonable, and whether the expert provided an objective accounting of the diversity of practices accepted as meeting standards in the medical community. The reputation of responsible experts would be enhanced by a satisfactory evaluation by the review board. On the other hand, an unsatisfactory evaluation could be used to impugn the testimony of those physicians who repeatedly sell malleable opinions in our courts. An unsatisfactory evaluation would also increase the chance that a defendant who has been wrongly charged with medical malpractice could recover damages in a suit charging the plaintiff's attorney and expert witness with "vexatious litigation."

In considering the long overdue policing of experts in medical malpractice litigation we should accept the challenge offered in an editorial in the *National Law Journal*, "If the medical profession wishes some relief from what it views as onerous oversight, exorbitant insurance premiums and undeserved legal scrutiny, then it will have to get its own house in order."[10]

Peter R. Dodds M.D., F.A.C.S
Wilton

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The Epidemiology of El Niño

"He that observeth the wind," declares Ecclesiastes, "shall not sow; and he that regardeth the clouds shall not reap." Perhaps; but most early cultures saw substantial benefits in relentlessly studying the winds since they perceived atmospheric change to be a major cause of disease; and in these winds, they also believed, were to be found hints of their destiny.

Over two millennia ago the great physician of the island of Cos, Hippocrates, taught that human illness was caused by secular phenomena which resulted in an imbalance within the constituents of the body; and that these systemic alterations, in turn, were governed by such natural events as atmospheric and climatic variation.

The Hippocratic text called "*Air, Water, Places*" begins with these instructive words: "Whoever wishes to pursue properly the science of medicine must proceed thus. First, he ought to consider what effects each season of the year can produce; for the seasons are not all alike, but differ widely both in themselves and at their changes. The next point is the hot winds and the cold, especially those that are universal, but also those that are peculiar to each particular region."

And for the next few millennia western medicine believed fervently in the capacity of the winds to transport both distress and sickness. During the Middle Ages, southern England was said to suffer greatly from malaria which was authoritatively ascribed to noxious, putrefactive mists emanating from the fenlike swamps of Suffolk. Fifteenth-century clerical chroniclers took careful note of weather changes such as frosts and great winds and regularly associated them with epidemic intervals. The years between 1433 and 1440, for example, were years of much bubonic plague but also a time of blustery, damp winds and cold. Indeed medieval winds were more than mere westerly or northerly winds; they frequently were classified also as portentious, idle, evil, kindly, cruel, faithless, benevolent, bountiful, or even ill (in the words of Heywood, "an ill wind that bloweth no man to good.")

Long before the indictment of bacteria and viruses as the agents of air-borne contagion, winds—especially those associated with mists and fog—were deemed responsible for much of human pestilential disease. A major school of medical belief contended that ill-defined noxious substances were carried by tainted winds, called miasma (from a Greek word meaning stained or polluted.) Relief, it was contended, might be sought by moving to hilltops free of mist or to drier, warmer climates.

In a world innocent of any notion of the underlying nature of infectious diseases, the miasmatic theory of illness easily prevailed. Only when causative agents were indisputably linked with diseases such as cholera, tuberculosis, and plague did the miasmatic theory of disease finally retreat. Yet in 1876, a decade after the germ theory of disease became widely accepted, a major English textbook of medicine still asserted: "The miasm may be carried by the wind and atmospheric currents beyond the limits of the area in which it is produced." It would be a while before mists and changing winds would finally become mere climatic elements rather than emissaries of disease.

Every five years or so, the chilly but nutrient-rich Pacific Humboldt current off the western coast of South American is displaced by a warmer, but nutrient-poor equatorial current producing a sharp drop in eastern Pacific ocean fishing yields. This cyclic deviation in the distribution of oceanic currents also generates dramatic changes in wind patterns, temperatures, and precipitation over much of South America. Typically, these climatic anomalies begin to occur about Christmas time hence they are called El Niño [Spanish for the Christ child.] Since 1984 there have been four recorded El Niño episodes.

The El Niño phenomena result in dramatic modification in climatic conditions, indisputably in South America and possibly elsewhere. There has even been speculation that El Niño is also correlated in some fashion with global warming; and perhaps, as a vestigial hint of the moribund miasmatic theory, even some changes in the incidence rates of certain infectious diseases.

In recent years, the Pan-American Health Organization (a branch of the World Health Organization) has heightened its South American surveillance of such diseases as malaria, dengue (a viral disease carried by the mosquito), and cholera. During the past year, they have recorded over 200,000 cases of acute malaria in Peru alone, this sobering increase coinciding closely with the increased rainfalls and resultant humidity which favor mosquito propagation. The excessive west coastal rainfall of South America, associated with El Niño, has resulted in local flooding and therefore a predictable rise in cholera (a water-borne infectious disease historically correlated with flood-created sewage contamination of the water supply.)

In general during this past year, El Niño has caused flooding in some South American regions, drought in other regions, and, in general, a significant disruption of public utilities and public health services all contributing materially to the local deterioration of health.

A recent west coast United States outbreak of human dysentery, caused by Vibrio *parahemolyticus,* has been blamed on the warming of the oceans near the west coast oyster beds, an indirect effect of El Niño. This demonstrated warming has created a more favorable environment for the growth of the *Vibrio* organisms in the vulnerable oysters.

The world is no longer a quiet place with distant sites known only through legend or belated news reports. The winds that blow over the southeastern Pacific may affect the health of an elderly widow in a Peruvian village, the income of a Chilean fisherman, the edibility of fresh oysters from the Oregon coast, and, perhaps in subtle ways, even the well-being of a child in Westerly, Rhode Island. Truly, the world is shrinking. Yesterday's disease on a distant continent may be an ominous neighborhood problem before tomorrow's sundown.

Stanley M. Aronson, M.D.
Editor-in-Chief
Medicine and Health / Rhode Island
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50 Years Ago

From *The Connecticut State Medical Journal*

February 1949

Hypertensive Sympathectomy

William Beecher Scoville, M.D.,
Associate Neurosurgeon, Hartford Hospital
Robert L. Post, M.D., *Hartford Hospital, 1945-1946*

The surgical treatment of essential hypertension has been accepted now as the treatment of choice in selected cases. Roughly, 50 per cent of all types of hypertensive patients will be benefitted sufficiently to warrant their undergoing this major, two stage procedure. The average practitioner, cardiologist and neurosurgeon would welcome more exact criteria for the proper selection of such patients. This article constitutes a preliminary report of a chart to be used on all hypertensive patients under consideration for operation. It attempts a quantitative evaluation of the probable benefit to be derived from the operation. No claim for originality is made for any of the criteria used. Smithwick, Peet and the Mayo Clinic have done the pioneer work and others have added refinements.

The preoperative chart, which has been used at the Hartford Hospital since 1940, lists a majority of the accepted criteria, collected on one sheet of paper, each quantitatively valued on a zero to four plus rating for the expected benefit to be derived from operation, zero indicating no benefit, and four plus indicating maximum benefit. A score is then placed after each test and the average of all scores taken. *Operation is urged on patients having an average score* of *three or four plus; refused on a score* of *zero or one plus and advised but not urged on a score* of *two plus.* A postoperative chart containing the few tests needed for proper evaluation of the results of operation is also described. A final report will be made upon completion of a five year survey of one hundred postoperative cases in order to evaluate the suitability and relative importance of the criteria used in these charts.

Excerpt from *Criteria for Hypertensive Sympathectomy, Preliminary Report of a Quantitative Rate Chart*, 1949; 2:95-9.

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For Manners Are Not Idle

LOUIS A. BUIE, M.D., *Rochester, Minnesota*

Now in this time when all that is human tends to be regarded as something reprehensible, I, myself an erring mortal, have the temerity to come before you, an association of physicians, and to offer you, of all things, a panacea. Nevertheless, bear with me if you can, for what I hold forth is not a nostrum. It is nothing, in truth, so satisfyingly concrete as that. It is rather an abstraction, a matter of behavior, which, when sterling, has its source in the character of a man and only when counterfeit is buttered upon him.

Yet, out of my sadly incomplete knowledge of how the centuries have molded the convictions of men, I venture to say that down through the ages, this trait, this quality which I have in mind, has been accorded its place of importance. Otherwise, springing from the so-called Wisdom Movement of the Near East, there might not have been preserved in the Biblical Book of Proverbs, that which reads, “A soft answer turneth away wrath.” Later, comparatively recently in fact, since it was in Elizabethan times, Shakespeare put into the mouth of no less than the Lord Chamberlain Polonius his precepts to his son. Moreover, whatever people in general may think of Lord Chesterfield, and whatever Samuel Johnson did not think of him, men of this age occupy no height from which to look down upon him. And who can say that his preoccupation with how a man should gracefully bear himself with relation to his fellows had nothing to do with the distinguished political service he gave to his country, including what most administrators have found impossible, conciliation of the factions in Ireland? Again, Cardinal Newman, the author of “Lead, Kindly Light,” whose life was almost coextensive with the nineteenth century, saw fit in his discourses “The Idea of a University” to introduce two well known paragraphs with the sentence, “Hence it is that it is almost a definition of a gentleman to say he never inflicts pain.” And to come down to the present time, that century which was borne in on so high a tide of hope but wherein, man is now struggling for existence in a whirlpool of degradation: can it not be asked whether in this time hope could have been renewed if present political opponents of the United States had read or, having read had retained, a memory of the works of this great man?

Therefore I, in my imperfect attempt to follow after the great men whose thoughts I have just cited, ask your leave to consider, for a few moments, how we physicians, in the various roles we must assume in this modern day, perhaps can perform our tasks with greater ease and effectiveness than otherwise we could if, in a world which seems no longer to value consideration for others, we insist on conducting our affairs with good manners, with courtesy, with decorum.

Never in the history of our organization have those within it, and those outside it, needed the organization more. The association maintains its effectiveness. Yet these are times of stress. Stress engenders fatigue and fatigue, impatience. Out of impatience come altercation, enmity and the search, in unlikely places, for solutions of problems. Perhaps these are reasons why we physicians find great obstacles in our path as we set ourselves to the task of maintaining the standards of our work, or of elevating them. The nature of these obstacles is familiar to everyone here. Suffice it to say, there are modern institutions and organizations, and even large segments of our population whose interests we seek to defend, who face with skepticism and even with antagonism the proposals which we offer as solutions of perplexing problems.

Yet I believe that the people of the world not only are tired of struggle against hunger, illness and an uncertain future but that they also are tired of strife. If this is so, it is particularly desirable now for our association to function with harmony among its members as well as in its environment. To this end the physician must consciously deal gently with his colleagues and he must exercise extreme caution as he proceeds with plans for the benefit of those among whom he dwells. Very easily he can offend without intention. Among those who work for a living he is accorded, whether he wishes it or not, a slightly superior position. This he may accept but the assumption of a superior manner on his part will not be condoned, particularly by those of his neighbors whose knowledge of sociology and economics may be better than his. He will need constantly to employ his insight into human nature to get the other's point of view. From this exercise of his faculties, he will derive the habit of tolerance.

Certainly the physician will converse with many enlightened and competent individuals. Often they will entertain notions concerning medicine and the distribution of medical care which they will advocate with confidence and support with arguments which are satisfactory to themselves. Many times, to the physician, with his special knowledge of his own field, these arguments may seem worthy of contempt but he must not reject them with a contemptuous air. He must try to assume the objective position of an impartial inquirer and to seek some means whereby he may determine why, or even whether, his opponent is wrong.

Concerning some questions, the further he searches, the more he may become convinced that no answer is at hand and that some questions, if they do not transcend the limits of human understanding, may at least transcend its present resources. He cannot afford to permit himself to be discouraged by such experiences. He must be willing to take the time and to make the effort to clarify matters for others or to explain, fully, and courteously, that knowledge which would allow him to answer the question under consideration is not as yet available.

Such an approach discourages strife and encourages amicable discussion. It is through discussion that experience is analyzed and eventually, we hope, correctly interpreted. I said "eventually" because often the correct interpretation is considerably delayed while men in a free society experiment and discuss. This freedom to try and to think and to express ourselves, probably most of us consider among our greatest strengths and greatest blessings. This freedom, which allows us to take our time, may render us a little tardy. Nevertheless it allows us to live up to the precept, "First of all, do no harm."

Now, if the foregoing advantages lead most physicians to the conviction that private enterprise brings the greatest good to the greatest number, well and good. Nevertheless, if there is a dissenter among us who believes that our concern for the public interest should lead us to accept a greater measure of public control, is he less our brother?

Surely there is one community enterprise which he can afford to strengthen, to revive or to inaugurate, depending on our belief as to the state which existed formerly. I refer to a more or less generally recognized moral standard which, it seems to me used to have more force than it has now in guiding individual and corporate conduct.

It may seem that to treat of morals as a sub topic under good manners is to interchange the small for the great. But it is the fact that the two are related not the order in which they are considered, which is important. Tennyson, who had considerable influence in forming our Anglo-American culture, expressed the relationship in words of which I took part as the title of this address. He wrote:

"For manners are not idle but the fruit
Of loyal nature and of noble mind."

This is an age of science; an age of dangerous science; an age when science is about to outstrip all other activities. It is important to realize that science unrestrained by moral precepts, can destroy man and all that he possesses and inhabits. Man must learn to live with man and he must know how to conduct himself in the presence of his own capacity for destruction.

It should be possible to evolve a system or a manner of living which, when guided by conscience and principles of ordinary decency, might be capable of developing proper human relationships. I insist that this can be done, given the proper human behavior. In each and every human being, if the soul has been lost, the soul must be recreated. A community soul must be reborn; a national conscience; a native American morality. These must be displayed to the world. At the same time, all must be prepared, with good grace, to accept change in all values, even these.

Knowledge is the product of great labor and great sacrifice but it is the advance of ideas by which progress ultimately is determined. Progress itself depends on change. Consequently, it is probable that in the march of ages many different creeds, apparently good creeds, which now exist, are destined to die out and to be succeeded by some which are better. The world has witnessed the beginning of some of them and there is no assurance that it will not see their end. All values which are essential to human progress must sustain the shock and the vicissitudes of time.

Moreover, if man adopted only the opinions of his forebears and contemporaries, he would create nothing new. The result would be an evident decay of that vigor of character and that audacity of conception and execution which paves the way to achievement. Our duty as physicians is clear. We shall freshen the fabric of our knowledge. We shall color anew its various parts and harmonize its apparent discrepancies. We shall employ every resource which we possess in an effort to determine what is best for all and, having arrived at a sound conclusion, we shall uphold it zealously, being assured that if it is true, ultimately it will prevail. In addition, we shall urge it with courtesy that it may more likely be adopted with willingness. Perhaps tolerance, maintained in an atmosphere of righteousness, persisting through change, may develop into esteem and that, in turn, may broaden into something resembling affection for our fellow men.

The safest and most impregnable ground on which social advancement can be founded is the universality of the affections. It is the bond of our common humanity; it is the golden link which joins together and preserves the human species. It is in the acts prompted by these affections that the existence of the highest instincts of our nature is revealed. Affection can warm the coldest temperament and soften the hardest heart. Regardless of how greatly the character of an individual may be deteriorated and debased, this spirit is capable of redeeming it. It is a godlike attribute.

The affections even transcend death and we feel, in the presence of death, that something remains—something which possibly the eye of reason cannot discern but which the eye of affection perceives. If this be a delusion, it is one which the affections themselves have created and we are forced to believe that the noblest and purest elements of our nature conspire to deceive us. Of all the moral sentiments which adorn and elevate the human character, the instinct of affection is one of the most vibrant and profound. It is the choicest of our possessions and bears upon itself the impression of truth. It is at once the condition and the consequence of our being. It flourishes best in an atmosphere of consideration and courtesy.

In fact, there are few fields of human endeavor wherein attention given to the feeling of others can be neglected safely. This applies even in the realm of practical politics, wherein we physicians have much to learn. We have been censured and justly so, for our failure to enter into community, state and national life. We have felt that for us to enter politics was scarcely consonant with the principles of medical ethics. We have looked with lack of esteem on many whose activities have been confined to political life and we would have to use stronger language to give our estimate of the lobbyist. Now it is necessary, however, that we alter our opinion concerning these matters.

I do not believe that human progress is chiefly owing to the wisdom of governments. Those who control government often are the creatures of the age in which they live and are not its creators. Often their accomplishments are the result of social progress and not the cause of it. Many times such men are the accidental and insufficient representatives of the spirit of their time. They may defeat the interests of those whom they seek to protect by presuming to raise themselves into positions as supreme judges of national interests. Great political reform or improvement often is not originated by such individuals but by bold and capable thinkers who are outside the government establishment. Persons of the latter type may discern fallacies and may point out means by which they can be remedied.

Thus, it is no longer advisable for the physician to confine his activities to the care of the infirm. Much of the progress which he may effect will depend on governmental action, energized not by others, but by himself. It is imperative now that the physician with befitting dignity, assume his proper place beside those who determine the destiny of nations. We have a venerable precedent in the life of Dr. Benjamin Rush, signer of the Declaration of Independence. Since his time, a number of physicians have served effectively in political capacities.

If, in what I have said, my central thought has ever seemed too tenuous, perhaps I can bind all together by stating my basic conviction. I agree with the philosophy that mankind is more virtuous than vicious and that good acts are of more frequent occurrence than bad acts. We know that cruelty is counteracted by benevolence. We know that sympathy is excited by suffering. We know that the injustice of some provokes the charity of others and we know that new evils are met by new remedies.

Accordingly, outstanding qualities of estimable men are these: gentleness and courage, boldness and prudence, tolerance, reverence, confidence, stability, humility, wisdom, patience and honesty. I believe not only that possession of these qualities engenders good manners but that the exercise of good manners furnishes proper soil for the cultivation of these qualities. The two elements working together, not alone, I believe, would do much to allay those twin dreads of the world today: fear and want.

Finally, we in our profession, have been reared well. The code of ethics of our organization provides that "a physician shall be an upright man, instructed in the art of healing." Furthermore, he "must keep himself pure in character and conform to a high standard of morals and must be diligent and conscientious in his studies ... conducting himself with propriety in his profession and in all actions of life." Perhaps no other group is in a more favorable position to exemplify the union of good manners and good faith.

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What Kind of Health Insurance

(From an address by Agnes E. Meyer before the American Public Health Association, Boston, November 9, 1948)

The construction of adequate hospital facilities and the training of sufficient personnel to staff them must have first call on public funds, for no system of insurance, voluntary or compulsory, can have validity without them. If we rush into compulsory national insurance, the drain on public funds would be so great that the coverage of the nation with properly staffed health departments and the nationwide implementation of the Hospital Survey and Construction Act would be impeded if not impossible.

On the other hand, it is also a fact that we shall be forced to accept compulsory national health insurance before very long, unless we make a greater success of voluntary health insurance without delay, especially for the low income groups. The fear of sickness and the high cost of modern medical care must be lifted from the minds of our people. To achieve this, the medical profession must throw itself wholeheartedly behind all cooperative insurance plans whether for medical service or hospitalization.

The local medical societies must encourage instead of blocking the efforts of the Blue Shield to establish standards and to develop complete coverage of medical service. The various independent insurance systems in industry, labor unions, and other groups have come into being only because the Blue Shield has not improved the range and quality of its medical care. The first requisite is a predominance of laymen on the local boards.

New Drug in Tuberculosis Treatment

Dihydrostreptomycin, a derivative of streptomycin, has definite advantages over the original drug in the treatment of tuberculosis, according to writers of six papers in the November issue of the *American Review of Tuberculosis,* official publication of the American Trudeau Society, medical section of the National Tuberculosis Association.

The studies reported, which include the first to be published on the clinical use of the derivative, were conducted at New York Hospital-Cornell Medical Center, New York City; the Mayo Clinic, Rochester, Minn.; the Squibb Institute for Medical Research, New Brunswick, N. J., and the Merck Institute for Therapeutic Research, Rahway, N. J., according to an announcement made by Dr. Walsh McDermott, managing editor of the *Review.*

Dr. McDermott explained that dihydrostreptomycin was developed in industrial laboratories by the addition of a small amount of hydrogen to streptomycin, the antibacterial agent which has proved of greater value in tuberculosis treatment than any other known drug.

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FROM THE EDITOR'S DESK

Transfer of the Editorial Baton at *Connecticut Medicine*

January 1, 1999 marked, with appropriate quietude, another transfer of the editorial baton at *Connecticut Medicine.* After a selection process for a new editor was conducted by leaders of the Connecticut State Medical Society, this writer was named to succeed the esteemed Robert U. Massey, M.D. Fortunate indeed was Connecticut's medical community to have at the helm of its official organ of communication for 12 years this erudite physician-philosopher, editing and writing with Oslerian eloquence. Fortunate still will that community be for as long as our former editor wishes to contribute his Lewis Thomas-like "Reflections on Medicine" to this journal and to the cause of our professional enlightenment and durability.

Any change in the character of *Connecticut Medicine* seen during this editor's watch will be, of necessity, a reflection of a different career trajectory. Different experiences, and different points of view will clearly alter the observations of the healthcare landscape and of physicianhood in our state. Some changes can be expected while basic principles and content in publication goals will continue.

- *Connecticut Medicine* will give voice to scientific papers that inform the state's medical community and redound to the benefit of patients.
- It will encourage "symposia" integrating multidisciplinary contributions on important medical issues, as with the series of papers on breast cancer published in January.
- This journal will continue to serve as a vehicle for information on the "State of the Profession" regionally and nationally, with the customary and effective input from the leadership of CSMS.
- The journal will encourage dialogue via letters, commentaries, reflections and yes, data-based studies, on the bedrock tenets of the medical profession. It is at our peril that we leave such pithy matters as patient and physician autonomy, the code of medical ethics, the education and training of the next (and the next) generation of physicians to political, legal, administrative and business minds and agendas.
- Advocate for physicians but encourage more "team" mentality. Our nursing colleagues and our medical administrators have long since discovered, and applied, team concepts to their missions. Self-starting and self-driven though we physicians be, we need to team up on behalf of patients in a coordinated manner and put to rest the accusation "the right hand doesn't know what the left is doing."
- Finally, periodic deference to historical roots leavens the bread of professional life and can blunt the vicissitudes of our daily labors as well as guide us to "the right thing."

Connecticut Medicine could serve effectively in combining papers presenting varying aspects of a broad topic in a single issue. For example the ubiquitous vascular disorders of man addressed by the neurology, interventional radiology, surgical, and rehabilitation disciplines would be of interest to our readership. Preventive and therapeutic interventions in trama care could be addressed by practitioners from the smaller hospitals and communities as well as those working in the state's major trauma centers. We already have a promise for a collection of papers on Sports Medicine for an issue of the journal in the Fall of 1999.

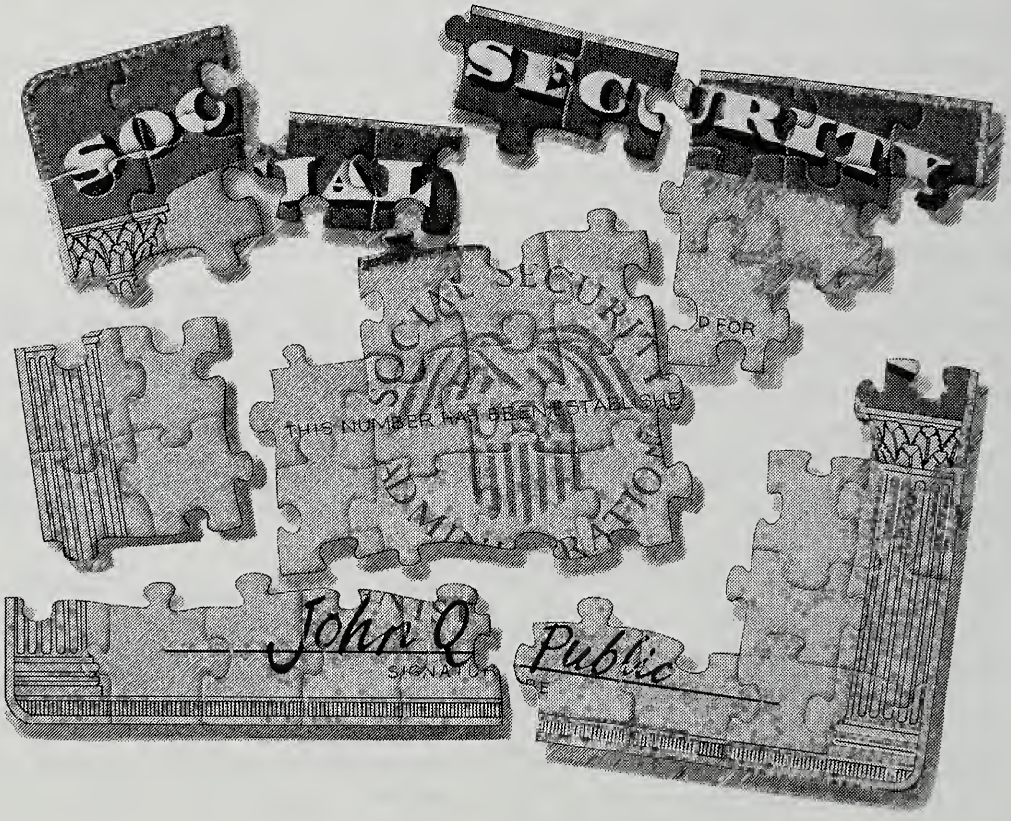
The ethical dilemmas arising daily around end-of-life decision making, palliative care, advance directives, effective pain management, organ transplantation and other issues are deserving of cogent discussion in *Connecticut Medicine.* Our larger healthcare institutions and our two medical schools contain individuals whose elucidation of ethical principles and precedents would provide knowledge and guidance to all who face these dilemmas.

Some see medical education, at the graduate and post-graduate levels, under siege in the managed care environment. Faculty development, curriculum development, mentoring, and the preservation of clinical and academic role models are all subjects worthy of discussion in these pages.

This editorial desk, this occupant of the chair, succeeding as he does to the tradition of the first editor, Stanley B. Weld, MD (whom I knew) and the previous, Robert U. Massey, MD, (whom I know better, thankfully), welcomes the thoughts, writings and contributions of the readership on these and other matters to enhance the value of *Connecticut Medicine* for the physicians of the state. Through all of you, that value will be translated into even greater value for the patient population we serve.

H. David Crombie, M.D.
Editor

Puzzled about Social Security?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Collective Bargaining by Physicians: Is It Time?

In the not too distant past, talk of unions or collective bargaining at a medical society meeting would have brought almost universal condemnation if not ostracism down upon the speaker. "Physicians are professionals," was the response, "and unions are for laborers and therefore below our dignity." There are still physicians who feel this way but raising the subject no longer brings the disapprobation it once did.

When the practice of medicine was a cottage industry and physicians took payment in full directly from their patients, unions would have been superfluous. With the advent of indemnity health insurance and "third party payors," an exceedingly small number of physicians began to see the threat to their autonomy when the insurance companies began to set limits on reimbursements. With the thorough penetration of managed care into our state and others, many make the argument that we have become de facto employees of the insurance companies since they set the fees and they decide when and if we will get paid for a given service. At the same time, the entrepreneurial spirit is being bred out of the medical profession. Almost no one can afford to start a medical practice anymore and small groups are hard pressed to take on new physicians. Most new physicians are ending up in salaried positions, true employees. Concurrent with this trend, those physicians who are still small business owners are beginning to merge with or consolidate into larger entities and thereby, in many cases, becoming employees themselves.

Our medical associations are being whipsawed by these trends. They were formed to provide services that the members could not obtain or afford on their own. As time goes by, the physician entities being formed will be self-sufficient with respect to the traditional products and services of the medical associations. Many are already questioning the value of their memberships.

In the midst of change, there is always opportunity. We at the CSMS have always been at the forefront in finding opportunity. Historically, we founded the medical school at Yale and the Institute of Living. We provided the physician leaders who helped found the AMA. More recently we founded CMIC, M.D. Health Plan, and M.D. Advantage. We are currently involved in the launch of the American Medical Accreditation Program, AMAP. I contend that now is the time for us to seriously investigate collective bargaining as it may be the one member need left, except for legislative advocacy, in which strength is still found in large numbers, that is numbers larger than most physician entities are likely to have.

Connecticut is certainly not alone at this juncture. At the AMA interim meeting in Honolulu, in December, there were sustained calls upon the organization to gear up to help physicians organize for the purposes of collective bargaining. Here in our state, there are already physicians who belong to unions.

At our most recent Council meeting, I asked that the issue of collective bargaining be put on the agenda for the next meeting. Representatives from the AMA will be joining us for purposes of an overview of what is happening elsewhere as well as the legal ramifications. It is my hope to see a task force appointed which, with no preconceived notions, will further investigate the possibilities of collective bargaining by physicians in Connecticut.

Collective bargaining is a venture which neither could nor should be entertained without broad physician support and assistance. I appeal to the members of the CSMS to make their views on this issue known to the organization. You may write to me at 314 Main Street, Oakville, CT, 06779 or email me at cczarsty@medservct.com. If you would like to participate in public debate, please send your letters to the Editor of *Connecticut Medicine*. If you have expertise in this area, and would like to share it, please make yourself known to the Society.

Craig W. Czarsty, M.D.
President

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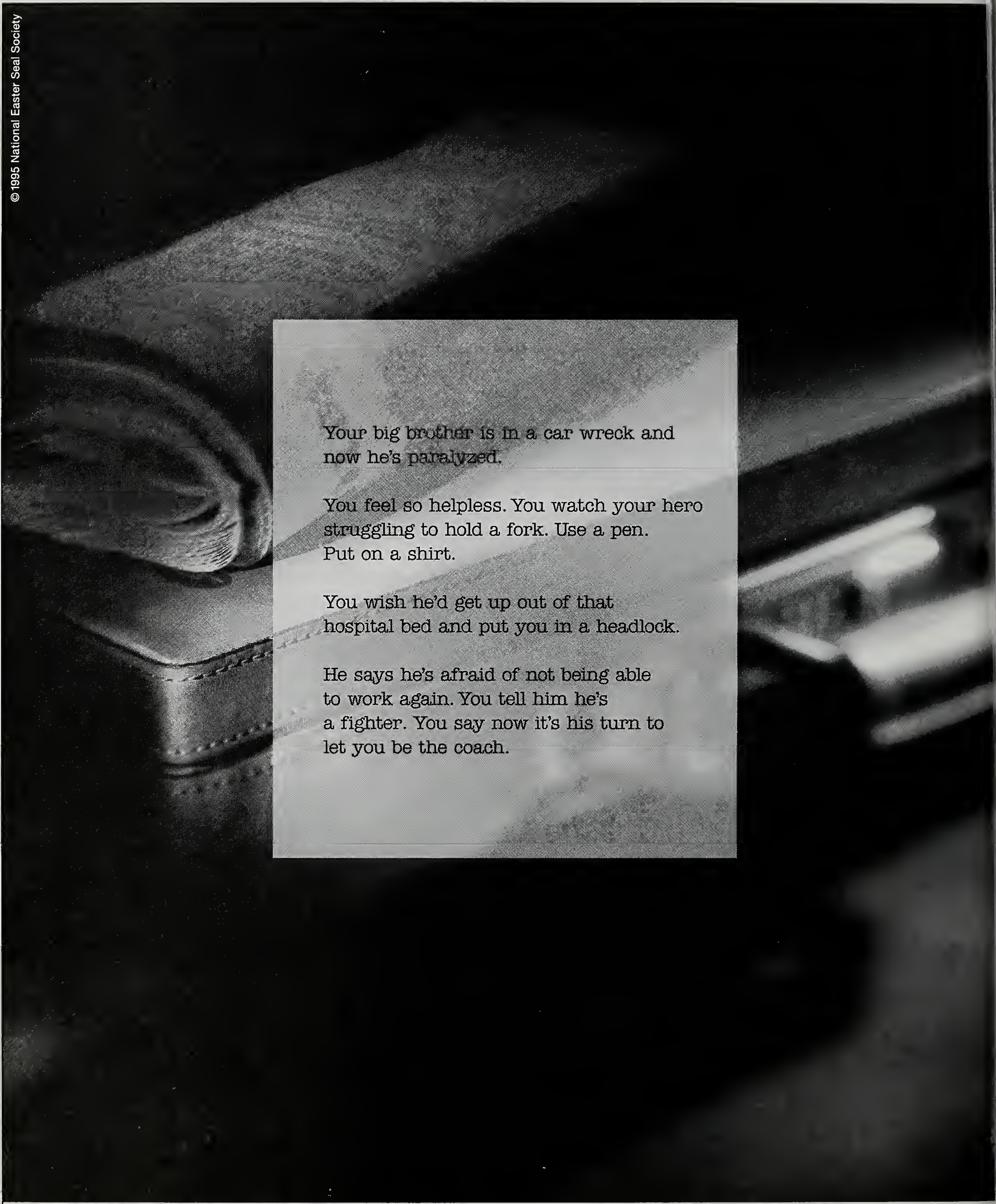

Your big brother is in a car wreck and now he's paralyzed.

You feel so helpless. You watch your hero struggling to hold a fork. Use a pen. Put on a shirt.

You wish he'd get up out of that hospital bed and put you in a headlock.

He says he's afraid of not being able to work again. You tell him he's a fighter. You say now it's his turn to let you be the coach.

Hope. That's what Easter Seals is all about. At some point in their lives, 1 in 5 Americans will be affected by a disability. We provide vocational counseling to help people get back to work: job training and placement, assistive technology and workplace adaptation. But we can't do it without your help. Support Easter Seals. Give ability a chance.

Easter Seals ®

Endless Invention

ROBERT U. MASSEY, M.D.

> The history of medicine is, in fact, the history of mankind, the history of humanity itself, with its ups and downs, its brave aspirations after truth and finality, its pathetic failures. —Fielding H. Garrison, M.D.

WHEN, as occasionally happens, I am asked to talk to medical students about medical practice, its ethics and traditions and why it is the way it is, the request is often accompanied by an admonition from the faculty member in charge, "Not too much history."

Students and young physicians have long since tired of their parents or older physicians expounding on the glories of the past, tired of hearing "how things were when I started practice." With few exceptions they know little history, almost no medical history, and anyway the past is irrelevant. I recall attending a medical school commencement ceremony in Hannover at the Medizinische Hochschule. It was a happy, but entirely informal occasion. I asked what had happened to academic robes and especially the fancy European academic hats. A faculty member reminded me that the Middle Ages were long gone, and the only history that he as a German cared to recall was that since 1945. In contrast, an elderly retired nurse at the Charité in Berlin, well into her ninth decade and now working as a kind of gate keeper, took several of us into the old amphitheater and standing at the podium told us proudly in her Berlin German that Virchow and Frerichs and Naunyn and Müller had once stood right here!

In his quarterly piece in *The American Scholar*, Sherwin Nuland wrote last fall:

> The prevailing mood of our time is self-absorption, and its natural extension, narcissism. Manifestations are everywhere apparent: the youth culture; the huge market in cosmetic surgery; the entire cult of "personal fulfillment"; the so-called human potential movement; the outsize emphasis on the individual...; the popularity of new drugs to grow new hair or build new erections; and finally, the very situation I am addressing here—the possibility that research in genetics will put us on the road to eternal life. In pursuing vanity, far too many of us have simply lost hold of our senses. There has never been a period in human history during which the creed of self-indulgence has found so many apostles.

The late autumn of both the Western and Eastern Roman Empires and of France before the Revolution were times of self-indulgent foolishness, but a strong corrective was waiting in the wings among the nameless great middle of society. Today only occasional prophetic voices are heard, not much listened to, and with no palpable threat of plague, famine, war, or financial disaster, the pursuit of vanity is likely to go on—at least in the prosperous West. The scholarly bearers of wisdom and sound learning in society have long since lost themselves in incomprehensible philosophies, talking in jargon, deconstructing everything. It is difficult to explain to medical students that it was once not quite this way.

Nuland suggests that the speed with which new facts and new technologies are pouring out from our overstimulated research industry, promising the wonders of cloning, freedom from lowness of spirits, disease, and even death, are overwhelming our narcissistic society, making us "very much like an overstimulated child" with an abundance of toys never dreamed of only 50 years ago. He suggests we slow down, give ourselves time to mature, move from our excess of information toward knowledge, wisdom, and finally a mature life. He quotes T. S. Eliot saying almost the same thing:

> Where is the Life we have lost in living?
> Where is the wisdom we have lost in knowledge?
> Where is the knowledge we have lost in information?

But Eliot seems to be saying that we will never mature, for in the next two lines which Nuland did not quote, he adds:

> The cycles of Heaven in twenty centuries
> Bring us further from GOD and nearer to the Dust.

ROBERT U. MASSEY, M.D., Professor Emeritus, Division of Humanistic Studies, Department of Community Medicine and Health Care, University of Connecticut School of Medicine, Farmington.

Back in the early 1930s, around the time of the Chicago World's Fair, "A Century of Progress," I read a book, whose title and author I forget, that extolled the amazing advances of the preceding century, a century that, he wrote, had belonged to biology and chemistry, and to the engineers. He added something like this, "The physicists have not been heard from since they crawled inside the atom." Twelve years later, on 16 July 1945, from Trinity Site near Alamagordo, New Mexico, the world at last learned what the physicists had been up to. J. Robert Oppenheimer, after witnessing the bomb's explosive force of 17 kilotons of TNT, almost double the expected 10 kilotons, is said to have recalled these words from the *Bhagavad -Gita:*

> I am become death
> The shatterer of worlds.

When the atomic bombs had wiped out Hiroshima and Nagasaki a month later few of us had any serious doubt that someday the world we knew would end in a nuclear holocaust. More than 50 years have passed, less than 1.5% of the time since the beginning of recorded history. Eighty-five years of almost continuous warfare somewhere, yet the fear of that threat seems to fade with every passing decade. That *is* the danger.

Now back to the biologists and biomedical scientists. cloning human beings is almost certain to occur within the first few years of the new millennium. That narcissistic amazement will shortly be followed by some genetic tinkering that will result in the possibility of immortality, first in frogs, then in mice, and finally in those foolish, but mostly very bright, overstimulated adult children who have the means and stomach for it. Didn't the serpent assure his clients, "Ye shall not surely die.... and ye shall be as gods"? In time, society may discover a way to deal with the consequences of misapplying what we have learned about the workings of the cell, just as we have learned that the force in the atomic nucleus as a source of cheap energy is not all it was cracked up to be.

The biologic equivalent of the nuclear bomb is a different matter. I have no doubt that the genetic machinery of the human immunodeficiency virus is well known, part of our information trove, displayable on anyone's computer screen. It must be easier to mess with than the human genome. What if a way should be found to modify this virus so that it could be as readily transmitted as, say, the measles virus? Viruses are surely much cheaper and easier to deliver than an atomic weapon, far more effective than something crude like *Bacillus anthracis* . The possibilities for the biologists who have now crawled into the cell and its genome, just as the physicists of 70 years ago were messing around inside the atom, are endless. Since we are now in the information age, with miles to go before we reach the ages of knowledge and wisdom, a few more lines from T.S. Eliot's "Choruses from 'The Rock'" should conclude these happy thoughts:

> The endless cycle of idea and action,
> Endless invention, endless experiment,
> Brings knowledge of motion, but not of stillness;
> Knowledge of speech, but not of silence;
> Knowledge of words, and ignorance of the Word.
> All our knowledge brings us nearer to our ignorance,
> All our ignorance brings us nearer to death,...

But then before begging our friendly neighborhood euthanasiast for help we should hear e. e. cummings:

> —listen:there's a hell
> of a good universe next door;let's go

MEDICAL NEWS CAPSULES

This Month's Reading in Review

TIMOTHY B. NORBECK

"The HMOs have such significant penetration and the scales are tipped so far in their direction that to provide a little bit of power on the other side" won't give doctors undue market clout.

An aide to California Representative
(R) Tom Campbell, in promoting the
congressman's bill which would allow
negotiations between "any group of
health care professionals" and health plans.
AM News (11 January 1999)

"The overall quality-of-care could decline if highly qualified students decide not to become physicians, either because of the faltering enthusiasm of their physician role models or because they are unable to foresee financial rewards that are sufficient to repay their large educational debts or to maintain a reasonable standard of living in exchange for the effort and expense of becoming a physician.... Competition for patients between doctors or groups of doctors can destroy longstanding cordial relationships.... One thing we know: disgruntled, cranky doctors are not likely to provide outstanding medical care. Payers, insurers, and legislators must recognize this predicament and stop pretending that doctor discontent doesn't matter."

From an editorial on "Doctor Discontent"
in the *New England Journal of Medicine.*
(19 November 1998)

"The answer is not-for-profit medical care for all and the elimination of the for-profit health insurance industry and their HMOs that have proved they can't do it cheaper. That would mean the rising number of people without medical coverage would decline, choice of doctors and hospitals would return, and all the health care money would be spent on health care."

From a physician's letter to *USA Today*
(31 December 1998)

A survey taken before the November 3 election by the Henry J. Kaiser Family Foundation, a nonprofit research and philanthropic organization, and Harvard University, found that Americans' concerns about managed care have increased, as has approval for consumer protection proposals.... Support for government involvement to protect consumers in managed care plans rose to 65% in the September poll, from 52% in September 1997.

Congressional Quarterly
(2 January 1999)

"If you can choose who changes the oil in your car, you ought to be able to choose who delivers your baby."

Newly elected Georgia Governor Roy Barnes (D),
in railing against HMOs and proposing patient
protection laws. *Atlanta Journal-Constitution*
(5 January 1999)

Who Needs Educational TV? We Do.

Only 2% of Americans teenagers 13 to 17 years old are aware that William H. Rehnquist is the Chief Justice of the United States - the highest post in our judicial system.... By contrast, 95% of teens know that Will Smith played the role of the Fresh Prince of Bel Air on a television sitcom.

Parade Magazine (27 December 1998)

Remember all the hoopla over the Oregon Universal Health Plan a few years ago—the program that was going to be a model for the country? ... They deserve credit for the attempt, but it is not working.... Apparently free services have now been replaced by premiums ranging up to $28 per month, with the state expelling those who do not pay.... Costs have prevented 350,000 Oregonians from being enrolled, even with a new injection of funds via a hike in the cigarette tax.

Washington Times (5 January 1999)

A recent MetLife survey finds that nursing home care nationwide costs seniors an average of $140 per day.... The figures range from a low of $90 per day in Louisiana to a high of $400 in Alaska (that's not a typo).... The Alaska figure prompted one Florida resort representative to note that such rates beat all but the best hotels, which "explains why Marriott has gone into assisted living."

St. Petersburg Times (21 December 1998)

Only in America: Jordan Locke was recently suspended for bringing an axe into a Pittsburgh public school.... It is important to note that the axe was plastic, only five inches long, and it was part of the firefighter costume worn on Halloween by Jordan.... Jordan broke a district policy that prohibits toy weapons.... Local firefighters protested that an axe is actually a tool.... Oh, yes, one other point: Jordan is five years old.

TIMOTHY B. NORBECK, Executive Director, Connecticut State Medical Society.

American Medical Accreditation Program

☆ The Connecticut State Medical Society and its affiliate, MD Advantage, along with the American Medical Association, have announced the implementation of the American Medical Accreditation Program—**AMAP**^{sm} in Connecticut.

☆ In late December, Connecticut physicians were sent an introductory mailing which included the opportunity for each physician to request their personalized **AMAP**^{sm} Application Kit, with the *application fee being waived for the first 90 days.* **Over 700 Connecticut physicians have already requested their applications. Have you requested yours yet?**

Do *you* need an AMAP application?

☆ **Call The AMAP Resource Center toll-free at 1-888-881-2627.** Monday thru Friday 8:00 am–4:30 p.m. (Central time).

☆ They will answer your questions, fill your requests for additional information **and** send you your personalized AMAP application packet.

☆ Visit the AMAP website at www.ama-assn.org/med-sci/amapsite/index.htm for information and to review the Standards and Criteria currently used to evaluate physicians in the first three components of AMAP (credentials, personal qualifications, and environment of care).

☆ **What are you waiting for …** join your colleagues who have already requested their personalized AMAP Application kit. **We are still within the 90-day "no-fee" period.**

☆ **AMAP *is* the One Time, One Source, One Standard Solution … you** can help to significantly cut your paperwork and other credentialing hassles.

A Summary of the 199th AMA House Meeting

E&M Documentation Guidelines …

Adopted Substitute Resolution 804 in lieu of seven resolutions on fraud and abuse and E&M guidelines. Also:

- Adopted a "clear and unambiguous" statement that America's physicians have had enough of unfair fraud and abuse enforcement and will not stand for harassment by auditors or false accusations of abusive and fraudulent behavior.
- Demanded major changes in Medicare payment reviews and well-designed pilot tests of any new E&M guidelines.
- Instructed the Board to continue technical assistance to HCFA thought the CPT Editorial Panel to produce simpler, patient-centered, clinically relevant, and nonintrusive guidelines.
- Directed the Board to continue advancing alternatives to numerical guidelines (eg, peer review of statistical outliers).

Ad Hoc Committee on Governance Report …

The House adopted the report largely as delivered, with these highlights:

- The goals of the Strategic Plan should become an overarching part of all Board and Council meetings, with all new initiatives and emerging issues regularly measured against the plan.
- AMA Bylaws will be amended to: include a Chair and Chair-elect as officers of the Board, each limited to a single one-year term, with the Chair-elect automatically succeeding to Chair; preclude the Chair from immediately running for the position of President-elect; provide that no AMA officer or trustee shall be eligible to serve as Executive Vice President within three years of leaving office.
- The Speaker and the President should establish a committee of the House to determine the structure of compensation and to establish the amount of compensation for the Board of Trustees annually. The committee will provide an informational report annually to the House.

AMA Ad Hoc Committee on Membership Report …

The committee delivered its third report since it was established at the 1997 Interim Meeting. It provided 13 recommendations, ranging from strategic audits of recruitment and retention activities to changes in dues billing structure. In general, it lays out a groundwork for new directions and solutions to membership issues for consideration in 1999.

Organ Donation Campaign …

AMA launched a major national campaign to raise awareness of the need for organ donors. Based on the Texas Medical Association's "Live and Then Give" program, the initiative includes a video, brochures, and other educational materials.

Private Sector Advocacy …

The House adopted BOT Report 36, outlining the AMAs commitment to increasing its private sector advocacy efforts on behalf of America's patients and physicians. (See memo following this article.)

Finance Report …

Despite a year-end projected revenue loss of $5.1 million, the AMA projects net income of $3.4 million for 1998, attributed to strong cash reserves and solid investments. Consolidated operating revenues for 1999 are expected to be $256.7 million, with consolidated operating expenses projected at $262.2 million. The $5.5 million expected shortfall for 1999 is attributed to strategic investments in AMAP, CPT, and other initiatives.

For more details, use the Web … Delegates may find complete proceedings by visiting the AMA Web site at *http://www.ama-assn.org*, clicking on the Interim Meeting icon in the upper right hand corner and then following the prompts. You may download all reports and resolutions, as well as participating in exclusive members-only forums.

MEMO

AMA Private Sector Advocacy

The AMA has launched an aggressive and urgent campaign to highlight and correct the excessive power of health plans and others who are pursuing profits at the expense of patients and their physicians. The AMA, working collaboratively with the Federation, will be there to empower physicians who are fighting for their patients and the integrity of the patient-physician relationship. Our strategies include:

- An action oriented initiative at national and state levels to expose and eliminate unfair managed-care practices.
- Use of multidisciplinary response teams to provide immediate and visible presence in crisis situations where patient and physician rights are not being respected.

- Strengthening the negotiating positions of all physicians (self-employed, employed, residents) through legal collective bargaining options.
- Leading the legislative drive for market reform.
- Developing and distributing tools to empower physicians in dealing with the managed-care environment.

Benefits for AMA Members:

- Representation and Advocacy—with private insurance carriers, attorneys general, insurance commissioners, legislatures, Congress, HCFA, and the courts.
- Practical Information—Coping with managed-care issues, physician practice management bankruptcies, and assistance with organized networks.
- AMA Website: http://ama-assn.org
- Private Sector Advocacy Team: (312) 464-4641
- AMA Field Representative: (312) 464-4504

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The Physician Health Program

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A confidential, effective, compassionate and responsible approach towards recovery

◆ The **PHP** recognizes that most people may not know what to do when they suspect that a physician may be impaired, or how to help him.

◆ Referrals are accepted and come from many sources including colleagues, patients or friends, family members, and often from the affected physicians themselves.

◆ Referrals to the **Physician Health Program** are confidential, and experienced help is only a phone call away.

The **Physician Health Program**
is a service of the
Connecticut State Medical Society

For more information or to call in confidence, contact the **PHP** at
(203) 865-0587 or 1-800-635-7740

Neil J. Grey, M.D.
Medical Director

Michele R. Norbeck
Director

CPRO Marks 15 Years in Health Care Quality Improvement by Becoming Qualidigm

CPRO has officially changed its name to Qualidigm. We have changed our name to Qualidigm to more accurately convey our focus on healthcare quality improvement. "Qualidigm" combines two widely-used words in the healthcare quality improvement arena: "quality" and "paradigm." "Qualidigm" reflects the leading role that the organization expects to play in redefining "quality paradigms" with collaborators and clients in the health care industry.

While our name is different, not everything has changed, according to Marcia Petrillo, CEO. Qualidigm's primary contract with the Health Care Financing Administration (HCFA) is to provide quality oversight for the Medicare program in Connecticut and to lead several state and national quality improvement projects for HCFA.

Qualidigm has been selected to lead the National Acute Myocardial Infarction project, an effort focused on increasing performances of proven improving the processes of care for seniors who have suffered heart attacks. Qualidigm, working with the Health Care Financing Administration, will coordinate the initiative to increase performance of processes of care for heart attack patients. Aspirin therapy, use of beta blockers and thrombolytics, and lipid management are a few of the processes of care that have been shown to decrease mortality in AMI treatment and prevention. Project participants across the country will work with physicians and hospitals to provide education on these treatments and improve utilization of established treatments.

Another exciting new project in which Qualidigm will participate focuses on the quality of care in nursing homes. Qualidigm is a part of the team led by Abt Associates, Inc. of Cambridge, Massachusetts that was recently awarded a five-year contract with HCFA to develop and test new quality measures for post-acute and long-term care settings. This project will seek innovative ways to measure long-term care quality as part of HCFA's survey and certification process as well as internal quality improvement in nursing homes nationwide.

Qualidigm's work for HCFA is expanding in other ways as well. Qualidigm has entered into a partnership with RAND Corporation (RAND). This California-based research organization has been awarded the sole contract to conduct the Healthy Aging project for HCFA. Qualidigm is the primary subcontractor. The purpose of this national project is to promote evidence-based interventions that facilitate healthy aging among Medicare beneficiaries age 65 and older. The contract covers activities to be conducted collaboratively by RAND, UCLA and Qualidigm over a five-year period, beginning in October 1998. The scope of the work is national, targeting beneficiaries, physicians, and managed healthcare plans in various geographic regions.

"The major focus of our work over the past five years has been the development of interventions to improve healthcare for the Medicare population," said Qualidigm's Jeanette Preston, M.D., M.P.H., co-director of the Healthy aging project's second phase with UCLA's Scott Weingarten, M.D., M.P.H.. "We have found that it is not enough to simply promote awareness of preventive health services among beneficiaries and providers," Dr. Preston said. "Our priority is to develop interventions that promote awareness *and* prompt action by beneficiaries, physicians, and health plans."

The project is led by Laurence Z. Rubenstein, M.D., M.P.H. from RAND. Richard W. Besdine, M.D. of the University of Connecticut Center on Aging is a primary consultant on the project. In addition to Dr. Preston, other key Qualidigm staff involved in the project include Jeanne Scinto, Ph.D., M.P.H., responsible for design and analysis, and Judith Barr, Sc.D., responsible for project management and survey activities.

In addition to its contracts with the Health Care Financing Administration, Qualidigm also contracts with the State of Connecticut to oversee the utilization database for the state's Medicaid Managed Care program. Qualidigm also performs data analysis and quality improvement work in fulfillment of several private contracts, including work with Yale University, the University of Connecticut and other academic and community organizations.

Qualidigm's work extends across the health care continuum. The chart below shows the types of medical conditions Qualidigm addresses in a wide range of health care settings. Each project is conducted by a qualidigm team and by a physician clinical coordinator. For more information call Barry Waite, director of communications at 860.632.6347.

(continued on next page)

Clinical Quality Improvement Project	Setting: Long-term Care	Hospital	Managed Care	Community Based	Physician Office
Diabetes Mellitus				x	x
Cooperative Cardiovascular Project (CCP)		x			
Mammography			x	x	x
Pneumonia Pathway		x			
Pressure Ulcer	x	x			
Pneumovax '98			x	x	x
theINFObridge Project	x	x		x	
Preventive Services			x		x
Urinary Incontinence		x			
Hypertension		x			x
Stroke Prevention	x	x			x
Osteoporosis	x				x

Mammography Project Receives National Attention

Jeanette Preston, M.D., M.P.H., was recognized by the Archstone Foundation for her work on The Mammography Optimum Referral Effort (MORE) in Connecticut. The goal of the MORE project was to increase older women's mammography utilization by facilitating discussion of screening between physicians and patients, patient education and benchmarking patient performance and physician referral rates.

The Archstone Foundation gives their Award for Excellence in Program Innovation to those programs that improve the health, functioning and quality of life of America's older population. Dr. Preston is an Associate Clinical Coordinator for Qualidigm, as well as an Assistant Professor of Medicine, in the Division of Geriatrics at the University of Connecticut Health Center.

Letters to the Editor

Letters to the Editor are considered for publication (subject to editing and abridgement), provided that they are submitted in duplicate, signed by all authors, typewritten in double spacing, and do not exceed 1-1/2 pages of text (excluding references). They should not duplicate similar material being submitted or published elsewhere. Letters referring to a recent Journal article should be received within six weeks of the article's publication.

Regarding a New Procedure and an Old Concern

Letter to the Editor: A quick note regarding a new procedure and an old concern.

Recently the use of lasers for hair removal has made possible treatment of pseudofolliculitis barbae in a new and gratifying way. This procedure is potentially reimbursable by insurance companies when recurrent infection and or scarring has occurred. However, I have found most insurance companies are resistant to paying for this procedure, perhaps because of its newness and their lack of familiarity with the functional issues that it involves.

One of my patients has expressed the concern—shared by me—that such denial may represent racial bias. Although all races can develop this condition, it is more frequent in some races than others. There were, I believe, significant racial tensions over this issue during the Vietnam war era. I am writing this letter to bring this issue to your attention and to initiate a dialogue regarding potential racial profiling by insurance companies by hesitating to provide coverage for this new procedure. I look forward to a lively discussion.

Eric J. Thomas, M.D.
Middletown

Increasing Participation, Sharpening Focus of House of Delegates' Meetings.

Letter to the Editor: Increasing the attendance at the semiannual meetings by inviting two members from each of the various specialties was one of the resolutions that was discussed at the Fall session of the house of delegates meeting. Unfortunately, many of those in attendance were not prepared to give this issue, presented by CSMS president Craig Czarsty, the sustained debate which it deserved. Many members, including myself, believed that increasing the number of delegates would make future meetings too cumbersome or too long. Some thought that if members brought specialty interests for deliberation it would prove divisive. The issue was referred finally to council.

However, having discussed this issue with colleagues since then, several of them have expressed the desire to see their interests more specifically addressed at the house of delegates meetings. And they agreed that the idea of having members from the various specialty groups added to the regular membership was a good way to achieve that kind of focused dialogue. Thus it is important for council members to keep this resolution alive, study its ramifications, and give it the serious thought it merits. It should be rediscussed at the Spring meeting.

More than ever before, it is vital to the continued effectiveness of the CSMS that delegates, particularly the younger ones, perceive the semiannual meetings as valuable opportunities to move organized medicine's agenda forward. It is they who over the next decade will be called upon to guide the CSMS through the challenges it is facing now and the new ones it will be facing in the future. Many of them are entering practice at a time when medicine's professional and financial rewards are diminishing. Many feel the strain of providing for their families and of paying their mortgages more acutely than going to meetings. And it is easy to understand for many of them why giving up a day from seeing patients is interpreted as a loss of income and not as opportunity to make a difference. Thus it is important that the CSMS consider inviting delegates representing the specialties.

By adding a specialty-focused component to the delegates' meeting, the broad topic of cost containment may more easily be approached. Since it continues to be the driving force behind health-care reform it makes sense for doctors to find the solutions. For years now managed care has shaved down the cost of many surgical procedures and medical therapies and pocketed the savings. Not only is it preposterous to imagine that managed-care executives know better than doctors how to control costs and maintain quality, but it is wrong that they should pocket the savings for doing so. Some worry that special interests may prevail and that the meetings may degenerate into shouting matches. But I think that the quality of the discussions will be enhanced by the wider representation. Animated debate and disagreement can be very helpful. In fact, without it, physicians may never be able to regain control of medicine.

If we choose not to take advantage of all the opportunities which the house of delegates meetings offer, then we will have to abide by laypersons' decisions about how we treat our patients and how we make our livelihoods. Fortunately we have a second chance to regain control of health care because managed-care companies are faltering.[1] It won't happen easily or quickly. Neither will it happen without compromise and sacrifice. But the necessity is great and the opportunity may not come again.

Edward J. Volpintesta M.D.
Bethel

REFERENCE

1. Levick D: Big Employers' Health Care Costs Rise. *The Hartford Courant,* January 26, 1999, section d`, p.1.

CONNECTICUT STATE MEDICAL SOCIETY

INDEPENDENT PRACTICE ASSOCIATION

6,500 PHYSICIANS WORKING TOGETHER
TO PROTECT OUR RIGHT TO PRACTICE QUALITY MEDICINE

CSMS IPA, FORMED IN 1986 TO PRESERVE QUALITY MEDICAL PRACTICE WITHIN THE MANAGED CARE ARENA, IS NOW THE MOST COMPREHENSIVE PHYSICIAN NETWORK IN THIS STATE

WE HAVE REAL VALUE

OUR AIM IS TO BECOME A POWERFUL ADVOCATE FOR PHYSICIANS BY WORKING TO SUCCESSFULLY MANAGE AT-RISK HEALTH CARE DOLLARS IN ORDER TO INCREASE REIMBURSEMENT AND WITHHOLD RETURN

SINCE JANUARY, 1999 THE IPA HAS:
* negotiated the inclusion of PHS membership in our existing 12-year contract with PHS/MDHP
* obtained commitments from the Plan to:
- resolve claims issues
- resolve phone problems
- provide data on a timely basis

* established an independent office to better serve physicians
* appointed five provider-friendly CSMS-IPA staff members

ON BEHALF OF THE NETWORK WE INVITE YOU TO PARTICIPATE AND WORK WITH US TO HELP PROVIDE SOLUTIONS TO OUR COMMON CONCERNS

Connecticut State Medical Society - IPA, Inc.
160 Saint Ronan Street, New Haven, CT 06511
Kenneth R. Lalime, Executive Director

From the Executive Director's Office

COUNCIL MEETING

Wednesday, 20 January 1999

Attendance

Present in addition to the Chairman, Dr. Hollister, were Drs. Aleali, Beck, Bigos, Conant, C. Czarsty, J. Czarsty, Deren, Eslami, Herzog, Katz, Keating, Lesnik, Montegut, Sadowski, Scarpa, Schwartz, Timmerman, Turner, Van Linda, and Wetstone.

Also present were Mr. Norbeck, Ms. Lindquist. Mr. Brunell, Ms. Morelli, Ms. Norbeck, Ms. Schaffman, (all CSMS staff), Mr. Coffey, Mr. Fiorentino (HCMA and NHCMA staff), Mr. Thompson (FCMA Staff), Dr. Thompson, Mr. Lalime, (CSMS-IPA), and Mr. Pepe, (MD Advantage).

Absent were Drs. Ahamed, Bobruff, Brooks, Carolan, Franklin, Geary, Geist, Handelman, Maloney, Narayanan, Redmond, Sachs, Sindwani, Sosa, and Tesoro.

Reports of Related Organizations

CSMS-IPA: Mr. Ken Lalime, Executive Director of the CSMS/IPA, submitted a comprehensive 12-page draft report, which was distributed with the agenda, outlining the 1999 Operational Business Plan of the CSMS-IPA, Inc. Mr. Lalime briefly reviewed the report, which included the following: Management Overview, Operational Infrastructure, 1999 Budget, Primergy Relationship and IPA Work Plan. He stated that the operational plan was being presented to the IPA Board for approval. Dr. David Thompson addressed the Council and reported on the progress of the negotiations with FHS, stating that most of the issues raised have been amicably settled. Dr. Thompson replied to a number of questions raised by members of the Council.

It was VOTED to rent space in the CSMS building to the CSMS-IPA to be used as its New Haven headquarters.

MD Advantage

Dr. Deren reported that on 1 November 1998, The Connecticut State Medical Society and its affiliate, MD Advantage, along with the American Medical Association, announced the implementation of the American Medical Accreditation Program (AMAP) in Connecticut. In late December, Connecticut physicians were sent an introductory mailing which included the opportunity for each physician to request a personalized AMAP application kit, with the application fee being waived for the first 90 days. In one and a half weeks, the number of Connecticut physicians requesting applications was 398.

Dr. Deren stated that he was pleased to announce that MD Advantage, the CSMS affiliate, which will implement AMAP in Connecticut along with the AMA, has contracted with Connecticut Medical Insurance Company (CMIC) to provide Environment of Care (EOC) site reviews for Connecticut physicians seeking AMAP accreditation. Additionally, Health First Network (HFN), an NCQA accredited Credential Verification Organization (CVO) affiliated with MD Advantage's partner MED 3000, has been contracted with for credentials verification services.

AMAP representatives have been in discussion with several Connecticut IPAs, health plans and hospitals, and educational meetings are being coordinated with such groups as Connecticut Medical Group Management Association (CMGMA) and Connecticut Association Medical Staff Services (CAMSS).

Report of the President

Dr. Craig Czarsty reported on the following issues:

AMAP: He announced that the American Medical Accreditation Program (AMAP) has been launched in the state and everyone should have received the announcement with a reply card to request an application. It was reported that the success of this joint venture between CSMS and the AMA is dependent on physician participation and stressed that as leaders we must promote this venture.

AMA: A membership promotion for AMA membership is being undertaken. Mailings are going out jointly with the counties. There will be revenue sharing with the counties and state for all new members enrolled.

AMPAC: Membership in COMPAC is up this year, however, the numbers only represent 10% of the membership. He commended Dr. Timmerman for all the work he has been doing for COMPAC, such as attending county meetings to promote COMPAC. On a related note, pursuant to an action by the AMA delegation, a letter over the signatures of Drs. Czarsty and Sadowski has been sent to the AMA, nominating Dr. Sultan Ahamed for a seat on the AMPAC Board of Trustees.

NURSE PRACTITIONERS: Dr. Czarsty gave an update on the status of negotiations regarding independent practice for APRNs. A meeting was held with the CSMS lobbyist attended by CSMS and county staff to outline a negotiating strategy. Subsequently, the nurses were invited to a meeting at which they would bring a legislator favorable to their position and CSMS would bring a legislator favorable to the CSMS position. To date it has not been possible to arrange this meeting.

PERINATAL: Dr. Czarsty received a letter from the Department of Public Health regarding a project that it is undertaking regarding the perinatal transmission of infectious diseases and ways to make it easier for physicians and other providers to follow clinical guidelines from the Centers for Disease Control (CDC) and professional associations. Dr. Czarsty requested that CSMS Committee on Perinatal Morbidity and Mortality be the liaison to the Department of Public Health.

UNIONS: Dr. Czarsty drew attention to an article in the 4 January 1999 *AM News* with the lead headline "Delegates: AMA must do more to foster collective bargaining." The article included the following statement: "Collective bargaining and private sector advocacy are 'top priorities' with their medical societies and specialty groups back home, one physician after another testified in passionate pleas before the house." He reported that in his President's report before the CSMS House of Delegates in May 1998, he raised this very issue and stated that he still thinks it is a critical piece in the survival of medical societies. Dr. Czarsty requested that the Chairman of the Council put this topic on the agenda for the next meeting for some serious discussion.

Report of the Executive Director

Mr. Norbeck reported on the following items:

He reported on the Aetna proposed merger with Prudential Health Care. The AMA petitioned the U. S. Department of Justice to review and challenge the acquisition. AMA calls the merger anti-competitive, and that it limits patient choice and undermines quality of care. The merger makes Aetna the largest health insurer covering more than 22 million lives. Aetna CEO claims that their market share in its top markets will not exceed 30%, the figure that usually triggers antitrust scrutiny. However, Aetna will now have 60% of the Houston, Texas market, 50%in Dallas and more than 30% in Atlanta, Philadelphia, and New York. Congressman Tom Campbell of California has sponsored legislation which would give independent physicians the ability to band together and negotiate with HMOs. This latest merger of Aetna may possibly prompt more support in Congress for the Campbell bill. There are now six major health insurers: Aetna, Cigna, United Health Care, Foundation Health Systems, Pacificare and Wellpoint. Word is that Cigna and Humana are both on the prowl for their next merger target.

The Texas Attorney General filed suit against Aetna claiming violation of the state's Insurance Code, Administrative Code, and Deceptive Practice Act. Aetna is charged with distributing false, misleading and deceptive member materials. The materials state that members will be reimbursed for emergency care as long a prudent lay person would have considered the need for care to be an emergency, but the materials fail to disclose that Aetna routinely denies claims for emergency care regardless of whether the prudent member thought he was having an emergency. Aetna is still under-fire for their gag clauses even though they deny having them in their contracts.

Opponents of managed care reform spent 60 million dollars, not including 11 million dollars for advertising, to lobby Congress during the first part of 1998, an average of $112,000 per lawmaker. Managed care reform supporters such as the AMA, unions and trial lawyers spent a mere 14 million dollars to prevent federal managed care reform.

A *USA Today* survey indicated that the public rates education, defined as school quality, as their top priority in 1999. Health care ranks second, followed by Social Security and Medicare.

He noted that the President of the Health Insurance Association of American for the past six years, the former Republican representative from Ohio, Bill Gradison, has left that position as the chief HMO protector and joined the high-powered Washington lobbying firm of Patton Boggs. Gradison will be the senior director of public policy, focusing on health care, taxation and trade. Also interesting is that Patton Boggs is a Democratic-leaning lobbying firm, meaning that Gradison may end up supporting managed care reform.

He further reported that he has been asked to serve on the Board of Directors of Gaylord Hospital and believed there was no conflict of interest.

Report on AMA Interim Meeting

Dr. Joseph Sadowski, Chair of the CSMS delegation, reported that it is virtually impossible to attend all of the reference committee meetings that are scheduled. Dr. Sadowski assigned members of the delegation to the various reference committees, and they reported on the reference committee they attended. Some of the items discussed in the reference committee he attended were: negotiating with third party payers, fraud and abuse, medical director liability in a managed care situation, and anti-trust exemptions for insurance companies.

Dr. Katz raised a question about it being illegal for physicians to contract with patients who are on Medicare and quoted from the Medicare law sections 1801-2-3. It was VOTED that staff look into the law, which seems to be quite inclusive, and determine the regulatory body which make this impossible and report back at the next meeting.

Dr. Mehdi Eslami attended the reference committee whos major thrust was the strengthening of the federation and governance of the Association. The committee reviewed two 400-page reports prepared by a consulting firm which made 35 recommendations. The report included a review of some of the recent problems of the AMA. Some of the recommendations had to do with the role and responsibility of the Board of Trustees, strategic planning, risk management,, stakeholder involvement and other miscellaneous items.

Dr. Frank Scarpa reported that he served on the reference committee on constitution and bylaws. The committee reviewed the following issues: physician assisted suicide (which they opposed), professional courtesy, and selling of products in physicians' offices

A question was raised as whether it was acceptable for a physician to promote unrelated business products to his patients, and it was requested that CSMS legal counsel look into whether this practice was ethical.

CSMS legal counsel was also requested to look into alternative malpractice dispute resolution mechanisms.

Dr. Hollister attended the reference committee on accreditation standards. The committee adopted a resolution stipulating that the AMA work with JCAHO, HCFA, state legislatures, regulating agencies and other accrediting groups to ensure that there are no conflicts among standards and their interpretation and that the AMA work to ensure that accreditation remain in the private sector and not become a function of government. The CPT codes were also discussed, and the report recommends that the AMA continue to support the activities of the Correct Coding Policy Committee (CCPC) and to urge HCFA to accept CCPC recommendations relating to code edits. A series of E&M documentation guidelines were adopted by the committee.

It was noted that complete proceedings might be obtained by visiting the AMA website.

Resolutions Referred from House of Delegates 17 November 1998

The following items were referred to the Council:

(a) Resolution: Diminish The Inadequacies of Our Current Malpractice System:

Resolved, that CSMS Council shall study HMO liability, State Department of Public Health postclosure investigations, malpractice tort reform, and alternative dispute resolution, and report back to the next House of Delegates meeting.

It was VOTED to refer the resolution to CSMS counsel for study and report back to the Council.

(b) Resolution: Promotion of Solidarity Among Physicians

Resolution: Specialty Society Representation in House of Delegates

Neither of these resolutions were adopted, and the House voted to refer them to the Council for study and for engaging the specialty societies in greater collaboration, such as periodic Council of Presidents.

It was VOTED to refer these resolutions to a Council subcommittee to be appointed by the Chair of the Council, for study and report back to the Council. Dr. Hollister appointed Brian Van Linda, M.D., Chair, and Drs. Gerald Schwartz and Dr. Gregory Turner.

Legislation

In the absence of Dr. David Parke, Chair of the CSMS Committee on Legislation, Mag Morelli, CSMS Director of Government Relations, gave a comprehensive review of the status of the CSMS 1999 Legislative Agenda which was distributed to the Council. Also distributed to the Council were Proposed Concepts to be included in a Legislative Proposal regarding Managed Care Formularies and Fairness Standards in Physician Contracting. The Council VOTED to support these legislative initiatives.

Communications received from the Fairfield County Medical Association and Dr. Stephen Katz regarding the CSMS 1999 Legislative Agenda were referred to the CSMS Committee on Legislation.

Two other communications, one from the American Society of Internal Medicine concerning the issue of cigarette smoking cessation and the other from the Committee on Public Health regarding chiropractors and school sport physicals were received as information and will be referred to the Committee on Legislation.

CSMS Policy on Physician Contracting

F. Scott Gray, M.D., Danbury, a member of Fairfield County Medical Association, submitted for the Council's consideration the AMA's Model Managed Care Agreement (Parts I, II, & III) and requested that CSMS adopt the guidelines contained in this model agreement as CSMS policy He further requested that CSMS mount an aggressive campaign and distribute these guidelines to all CSMS members and encourage members to sign managed care contracts only if they contain the provisions as outlined in the guidelines.

Mr. Greg Pepe, Attorney, reviewed the documents submitted which included several model managed care medical service agreements which were drafted by the AMA general counsel's office as a tool for physicians to use when contracting with managed care companies. He noted that physicians should be aware of some of the issues that are relevant to physicians when contracting with managed care companies. Some of the things that have been deemed to be significant in those contracts and detrimental to physicians are nondisparagement clauses which managed care companies and HMOs try to put in their contracts. These have been ruled to be an infringement on patients' rights. Essentially these guidelines are a resource for physicians and are not intended to guide the individual's negotiations with managed care organizations. They are not intended to be absolute rules to govern negotiations, there may be reasons which countermand the guidelines.

One of the requests from Dr. Scott was that CSMS urge its members to sign managed care contracts only if they contain the provisions outlined in the guidelines. As this point, CSMS can potentially run the risk of being involved in a practice which could expose CSMS to some liability. In consultation with the AMA, it was determined that the position of CSMS should be that while these guidelines are provided as a tool, CSMS does not insist that everyone conform their behavior to these guidelines or not sign the contracts. It is inappropriate for CSMS to issue that kind of advice to Connecticut physicians, because CSMS cannot presume that it is aware of all the kinds of issues that go into decision making in a physicians office, and such a presumption may potentially expose CSMS in the area of anti-trust.

It was VOTED that the AMA's Model Managed Care Agreement (Parts I, II, & III be published in Connecticut Medicine with appropriate disclaimer to be written by CSMS counsel , and to provide a link to the AMA website on the subject.

Committee Appointments

The following committee appointments were approved:

Committee on Public Health: John Walker, M.D., Manchester, to replace Ulder Tillman, M.D., Waterbury, resigned.

Committee on Workers' Compensation: Michael F. Saffir, M.D., Bethany, to replace Joseph Zeppieri, M.D., Groton, as Chair. Dr. Zeppieri will remain on the committee.

Recommended Daniel Niejadlik, M.D., Middletown, to the Governor for appointment to the Committee on Medical Legal Investigations. W. Raymond James, M.D., formerly on this committee, resigned.

New Haven County Medical Association Assessment

Dr. Roger Beck, Treasurer, reported on a meeting held with the New Haven County leadership concerning the New Haven County assessment on its members. The way the assessment appeared on the New Haven County bill made it appear that it was a CSMS assessment. New Haven County agreed to send a letter to its members to clarify this misunderstanding. CSMS representatives affirmed that the CSMS is a unified state and the bylaws state that you must be a member of the county in order to be a member of CSMS. He reported that this is a New Haven County problem which they should resolve, and that CSMS stands ready to assist them in any way possible, including financial assistance. It was also noted that CSMS would write to members of New Haven County on the issue. Dr. Beck asked the Council to approve the concepts reported, and it was so VOTED.

Dates of Future Meetings

Council Meeting
Thursday, 25 March 1999

Annual Meeting—House of Delegates
Wednesday, 12 May 1999

Semi-Annual Meeting—House of Delegates
Wednesday, 17 November 1999

IN MEMORIAM

ABELL, RICHARD G., University of Pennsylvania School of Medicine, 1947. Dr. Abell, a psychiatrist, received a certificate of psychoanalysis from the William Alanson White Institute of Psychiatry, Psychoanalysis, and Psychology where he taught from 1965 to 1993. He also taught at the University of Pennsylvania Medical School, the New School for Social Research, Barnard College, the American Psychiatric Association Continuing Medical Education Program, and the New York University Post Graduate Medical School. He was the founder and director of the Transactional Analysis Institute of New York and the Divorce Mediation Institute of Fairfield County. He was a member of the Fairfield County Medical Association and the Connecticut State Medical Society. Dr. Abell died 3 December 1998 at the age of 94.

ALLEN, BENJAMIN, Washington University School of Medicine, 1932. Dr. Allen, an otolaryngologist and ophthalmologist, practiced in Westport from 1955 until his retirement in 1987. He served on the staff of Norwalk Hospital. Dr. Allen was a member of the Fairfield County Medical Association, the Connecticut State Medical Society, and the American Medical Association. Dr. Allen died 27 December 1998 at the age of 91.

CHASNOFF, JOHN A., State University of New York College of Medicine, 1936. Dr. Chasnoff practiced medicine in West Haven for 45 years and was associated with both The Hospital of St. Raphael and Yale New Haven Hospital. He was founder of the first medical emergency service in West Haven. Dr. Chasnoff was a member of the New Haven County Medical Association, the Connecticut State Medical Society, and the American Medical Association. Dr. Chasnoff died 12 December 1998 at the age of 88.

FLEISCH, MILTON C., Tufts University School of Medicine, 1940. Dr. Fleisch practiced pediatrics and pediatric cardiology in the Hartford area for 44 years retiring in 1991. He served on the staff of the Hartford, St. Francis and Mount Sinai Hospitals and as Clinical Associate at the University of Connecticut Health Center Department of Pediatrics. He was elected the last Physician/Surgeon-in-Chief of McCook Hospital and was involved in the creation of the University of Connecticut Health Center. He was a member of the Hartford County Medical Association and the Connecticut State Medical Society. Dr. Fleisch died 20 January 1999 at the age of 85.

GEETTER, ISIDORE G., Jefferson Medical College of Thomas Jefferson University, 1929. Dr. Geetter, an anesthesiologist, was the executive director of Mount Sinai Hospital from 1946 to 1972. Active in many local and national associations, Dr. Geetter was a past president of the Connecticut Hospital Association and the Connecticut State Society of Anesthesiologists. He was a member of the Hartford County Medical Association, the Connecticut State Medical Society, and the American Medical Association. Dr. Geetter died 17 January 1999 at the age of 96.

McALENNEY, PAUL F., Yale University School of Medicine, 1929. Dr. McAlenney, a retired New Haven pediatrician, was associate clinical professor of pediatrics at Yale University School of Medicine from 1932 to 1974 and chairman of pediatrics at The Hospital of St. Raphael from 1950 to 1964. He was a member of the New Haven County Medical Association, the Connecticut State Medical Society where he served on numerous committees during the 1960s and 1970s, and the American Medical Association. Dr. McAlenney died 23 December 1998 at the age of 94.

McCREERY, EDWARD P., JR., University of Virginia School of Medicine, 1942. Dr. McCreery was a founder of Orthopaedic Specialty Group and served as chief of orthopaedics at Bridgeport Hospital for 20 years. He was a member of the Fairfield County Medical Association, the Connecticut State Medical Society, and the American Medical Association. Dr. McCreery died 12 November 1998 at the age of 81.

PETRILLO, CHARLES J., Yale University School of Medicine, 1938. Dr. Petrillo maintained a private practice in otolaryngology in New Haven from 1947 to 1985. He was Associate and Assistant Clinical Professor at the Yale University School of Medicine and former Associate Section Chief of Otolaryngology at Yale New Haven Hospital. Past president of the New Haven Medical Society, Dr. Petrillo was a member of the New Haven County Medical Association where he served as a delegate to the Connecticut State Medical Society from 1981 to 1986, the Connecticut State Medical Society, and the American Medical Association. Dr. Petrillo died 31 December 1998 at the age of 84.

SHENKER, BENJAMIN M., New York Medical College, 1938. Dr. Shenker, an orthopaedic surgeon, practiced in Middletown from 1945 to 1979 and served as the Middletown school district staff physician for more than 30 years. He was a member of the Middlesex County Medical Association serving as their president from 1977 to 1978 and as an associate councilor to the Connecticut State Medical Society from 1978 to 1982, and the Connecticut State Medical Society where he was a member of the Committee on Medical Care for Veterans during the 1960s. Dr. Shenker died 5 January 1999 at the age of 85.

Consumer Concern or Complaint Form Regarding Group or Individual Health Insurance Including Managed Care Plans

To Be Submitted To
THE CONNECTICUT DEPARTMENT OF INSURANCE
CONSUMER AFFAIRS DIVISION
P.O. BOX 816
HARTFORD, CT 06142-0816

Phone: (860) 297-3900 or 1-800-203-3447 Fax: (860) 297-3872

The Consumer Affairs Division of the Department of Insurance receives, reviews, and responds to complaints and inquiries from state residents concerning insurance related problems. The staff examines each complaint to determine whether statutory requirements and contractual obligations within the commissioner's jurisdiction have been fulfilled. The Consumer Affairs Division coordinates the resources available within the Department to address consumer complaints.

In order for the Division to pursue a formal review of a concern or complaint, the consumer must submit a written explanation to the address listed above with as much pertinent detail as possible. Each written submission to the Consumer Affairs Division will be acknowledged.

Name of person filing the concern or complaint:

____

Address: ______________________________________

Phone where the Department can contact you: (____) ____________________

This concern or complaint concerns the following Insurance Company or Managed Care Plan: ______________________________

Policy Number: ______________________________

Name of Policyholder: ______________________________

Name of Enrollee: ______________________________

Name of Patient: ______________________________

Patient is ___ self ___ dependent ___other (explain)______________________

The following is a detailed description of the concern or complaint:

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CSMS PHYSICIAN PLACEMENT SERVICE

The Society maintains the Physician Placement Service as a *free* service to the medical profession, hospitals, and communities in Connecticut.

***Opportunities* should be typed, double-spaced copy on letterhead and submitted to CSMS, Physician Placement Service, 160 St. Ronan Street, New Haven, CT 06511 (203) 865-0587 or fax to (203) 865-4997. These will be published as space permits and will be distributed to physicians inquiring about such *opportunities*.**

***Physicians wishing to locate* in Connecticut may call the office requesting opportunities in their specialty. Also, candidates are invited to submit a resume to be kept on file with the Society. An announcement of a physician's availability will be published in two issues of *Connecticut Medicine* as space permits.**

Listing of physicians in the Placement Service does not in any way represent certification by the Society. Investigation of credentials and experience is the responsibility of those seeking applicants for positions.

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For Sale: Stamford, Connecticut. Retiring. Solo internal medicine practice. 35 years. All office essentials. EKG, x-ray, small lab. Several HMO affiliations. Current five-person coverage group. Very reasonable. Please respond to: IM/JG c/o CSMS.

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Choate Rosemary Hall, a coeducational, independent secondary school with 830 boarding and day students, seeks a Medical Director to lead an enthusiastic team of health professionals. This is an ideal opportunity for a physician who enjoys adolescents to direct a total health and wellness education program. The Medical Director is administrative head of the health center and in charge of all medical and mental health care, including referrals and follow-up. Staff consists of four full-time and seven part-time nurses, including a Director of Nursing. There are close working relationships with the school's faculty, advisors, counselors, and athletic personnel. The ideal candidate will hold an M.D. from an approved medical school. A board certified pediatrician with a specialty in adolescent medicine is preferred. The compensation for this faculty position, both salary and benefits, is highly competitive. Please send a letter of interest, resumé, and the names of three references to: Medical Director Search Committee, c/o G. Edmondson Maddox, Dean of Faculty/Assistant Headmaster, Choate Rosemary Hall, 333 Christian St., Wallingford, CT 06492.

PART-TIME

The Connecticut Disability Determination Services is looking for physicians with a background in internal medicine, family practice, or psychiatry who would be interested in performing case reviews on a part-time basis. Our agency administers the Social Security Disability program in the State of Connecticut and provides employment opportunities for physicians who find themselves at career crossroads such as transitioning to retirement or facing the demands of career and family. We offer flexible hours without the demands of a practice. The case reviews involve reviewing existing medical evidence of record and determining if the medical requirements of the Social Security Disability program are satisfied. Initially 10 to 12 hours a week are offered at a rate of $47.00 to $52.00 an hour. Please contact Jan S. Gilbert, Professional Relations Coordinator, Disability Determination Services, 10 Griffin Road North, Windsor, CT 06095; telephone (860) 298-2105.

Pediatric group in lower Fairfield county has opportunities for pediatricians, physician assistants or nurse practitioners who wish to "moonlight" evenings and Saturdays. Interested parties please fax CV to Denise Kinsella at (203) 857-5649.

Physician wanted for multispecialty group. Part-time possibly leading to full-time. No evenings, no week-ends, no on-call. Please fax VC to Physicians Plus (203) 795-9746.

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The Robert U. Massey History of Medicine Society

Upcoming Schedule of Presentations

March 10

Richard L. Judd, Ph.D., President, Central Connecticut State University

1966: The Birth of Modern Emergency Medicine

April 14

John Harley Warner, Ph.D., Professor, History of Medicine and American Studies, Yale University School of Medicine

Narrative at the Bedside: The Transformation of the Patient Record in Nineteenth-Century America.

The Robert U. Massey History of Medicine Society is an association of individuals interested in presentations and discussions on the history of medicine. The society seeks to foster an understanding of medicine's history and an appreciation for the cultural and social settings in which medical developments have taken place. The society also seeks to encourage health sciences students to acquire an appreciation for their historical heritage.

The society is affiliated with the University of Connecticut Health Center and is open to those who have an interest in the history of medicine. A roster of members is maintained in the Department of Community Medicine and Health Care. Those who wish to be included on the membership roster should notify this department to be included on the mailing list for society lectures. The willingness of members to present lectures or recommend speakers contributes to the society's ability to maintain community interest and to attract new members.

The society meets the 2nd Wednesday of the month at 5 P.M. in Lecture Room A of the University of Connecticut Health Center. *For further information:* Theo Ungewitter, Department of Community Medicine, University of Connecticut School of Medicine, 263 Farmington Avenue, Farmington, CT 06030-1910; (860) 679-2356; *email:* ungewitter@nso.uchc.edu

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Connecticut Medicine

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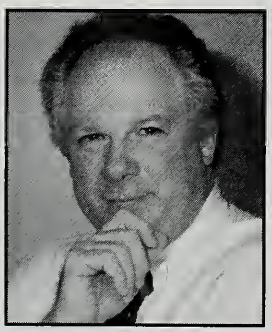

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Approach to Hyperkalemic End-Stage Renal Disease Patients in the Emergency Department

MARK A. PERAZELLA, M.D.

Introduction

PATIENTS who suffer from end-stage renal disease (ESRD) are at risk to develop a variety of metabolic perturbations, the result of their impaired renal function. One particularly life-threatening electrolyte disturbance that may develop is hyperkalemia. Electrical disturbances of the heart (ventricular arrhythmias, heart block, asystole) and neuromuscular dysfunction (weakness, paralysis) are the more dangerous manifestations of an elevated plasma potassium concentration.[1] Therefore, it is imperative that all physicians who care for these patients understand the importance of aggressive treatment of this electrolyte disturbance. Emergency department (ED) practitioners are one group of physicians who practice medicine on the front line and frequently encounter ESRD patients with potentially life-threatening hyperkalemia; physicians who moonlight in the ED also are included in this group. A basic understanding of the major physiologic mechanisms that regulate potassium homeostasis in ESRD patients is required to facilitate the rational treatment of hyperkalemia in such patients. Because the initiation of dialysis often involves a two- to three-hour delay, the immediate extrarenal management of hyperkalemia is required to temporize this potentially dangerous potassium disorder. Hence, this clinical review will focus on those physiologic processes which importantly control extrarenal potassium homeostasis and the implication of these mechanisms in the acute treatment of hyperkalemia in ESRD patients.

Physiologic Regulation of Extrarenal Potassium Disposal

Two distinct homeostatic mechanisms regulate potassium balance in the body.[2,3] Excretion of an ingested potassium load is one mechanism by which the body maintains potassium homeostasis. In the steady state, the ultimate goal of excretion is to match dietary intake of potassium with a nearly equivalent output. The kidneys, which normally excrete 90% to 95% of total intake, are the major organs involved in this process.[2] The gastrointestinal (GI) tract contributes to excretion of the remaining 5% to 10% of dietary intake.[2] Normally, this process occurs at a relatively slow rate and approximately half of an acute potassium load is excreted by the kidneys within four to six hours.[3] To handle this acute load of potassium and avoid hyperkalemia, the second important homeostatic mechanism of potassium disposal, cellular uptake, intervenes. The shift of potassium from the extracellular (plasma) to the intracellular fluid compartment occurs rapidly (within minutes) and redistributes this cation to tissues such as the skeletal muscle and liver.[3] Approximately 98% of total body potassium (3500 mEq) is located in the intracellular fluid compartment and 2% exists in the extracellular space.[3] This extrarenal disposal of potassium plays a critical role in the defense against hyperkalemia in ESRD patients, since these patients possess negligible renal excretory capacity.[2,3] In addition, gastrointestinal (GI) adaptation is insufficient to provide adequate potassium excretion in these patients.[2,3] There are a number of physiologic factors which importantly regulate acute extrarenal potassium disposal in ESRD patients and they will be reviewed in this paper.

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Insulin

Insulin plays an essential role in the uptake of potassium by cells and the maintenance of normokalemia in both normal individuals and ESRD patients.[1-3] Insulin, both in physiologic and pharmacologic doses, lowers plasma potassium concentration in a dose-dependent manner.[1-3] *In vitro* experiments have demonstrated the stimulation of potassium influx into the muscle fibers of isolated rat skeletal muscle which have been incubated with insulin.[4] The movement of potassium into the intracellular fluid compartment is thought to result from stimulation of the Na^+-K^+-ATPase pump by insulin.[5-6] Experimental evidence suggests that insulin acts to increase the affinity of this pump for sodium (thus increasing potassium transport) and to induce the translocation of Na^+-K^+-ATPase pumps from the intracellular to the plasma membrane compartment.[5-6] The location of these pumps in the plasma membrane facilitates active movement of potassium into cells in exchange for sodium.

In normal subjects, infusion of insulin at various rates decreases plasma potassium concentration in a dose-dependent fashion.[7] Plasma potassium levels decline by 0.5 mEq/L with an insulin infusion in the middle of the physiologic range (37 mU/L) and by 1.5 mEq/L with an infusion at a pharmacologic (1200 mU/L) concentration.[7] In contrast to the relatively glucose intolerant state (insulin-resistance) described in uremic patients, the potassium-lowering effect of insulin is preserved in both uremic rats and ESRD patients.[8-9] Incubation of uremic rat skeletal muscle with insulin reveals reproducible stimulation of the Na^+-K^+-ATPase pump.[8] Furthermore, administration of potassium with glucose (to stimulate endogenous insulin) in uremic rats is associated with a smaller increment in plasma potassium (1.4 mEq/L) as compared with uremic rats administered potassium (3.6 mEq/L) without glucose.[8] Continuous infusion of insulin to maintain a concentration of 100 mU/L (high physiologic range) produces similar declines in plasma potassium concentrations in both normal controls (0.95 mEq/L) and ESRD patients (0.98 mEq/L).[9] Subsequent clinical studies have confirmed this effect of insulin infusion on plasma potassium homeostasis (mean decreases of potassium by 0.6 to 1.0 mEq/L after one hour) in patients with ESRD.[10-11]

Catecholamines

Epinephrine, a mixed alpha/beta adrenergic agonist, has long been recognized by clinicians as an agent capable of lowering plasma potassium in normal controls.[1-2] As with insulin, it appears that catecholamines modulate potassium disposal through stimulation of the Na^+-K^+-ATPase pump.[4] Epinephrine has been shown to increase *in vitro* Na^+-K^+-ATPase pump activity and uptake of potassium in rat and frog skeletal muscle.[12-13] In these animal experiments, the effect of epinephrine is abolished by the addition of ouabain, a known inhibitor of this pump.[12] Studies in animals and humans have provided evidence that the potassium-lowering effect of catecholamines is mediated by the beta but not the alpha-adrenergic receptor. Infusion of isoproteronol (nonselective beta agonist) in six dogs produced a 1.0 mEq/L decline in plasma potassium after 70 minutes.[14] The addition of propranolol to isoproteronol in these dog studies blunted the decrease in plasma potassium.[14] The role of the beta-2 adrenergic receptor in potassium disposal is suggested by studies performed in humans. These clinical experiments demonstrate that both beta-2 selective and nonselective beta antagonists blunt the potassium-lowering effect of epinephrine, while beta-1 selective antagonists do not prevent epinephrine's effect.[15-17] Furthermore, selective beta-2 agonists such as albuterol and fenoterol, have been shown to decrease plasma potassium in normal subjects.[18-20]

In contrast to normal subjects, the potassium-lowering effect of catecholamines is more unpredictable in ESRD patients. In fact, anywhere from 20% to 40% of these patients have exhibited resistance to the effect of catecholamines on potassium movement.[1-2] Infusion of epinephrine in the physiologic range (0.01 to 0.04 mcg/kg/min) lowers plasma potassium in controls and renal transplant patients (approximately 0.6 mEq/L) but not in ESRD patients.[21] To evaluate the effect of the alpha-adrenergic component of epinephrine infusion in these patients, propranolol was administered with epinephrine in normal controls, transplant patients, and ESRD patients.[21] Plasma potassium increased to a greater degree in ESRD patients (0.5 to 0.7 mEq/L) *vs* controls (0.19 to 0.36 mEq/L) and transplant patients (0.2 to 0.38 mEq/L) when administered these drugs.[21] These data suggest that enhanced alpha-adrenergic stimulation in ESRD patients may contribute to the resistance to potassium-lowering associated with epinephrine. However, two studies that examined the effect of a selective beta-2 agonist on potassium disposal in ESRD patients revealed that these agents possess profound potassium-lowering effects.[11,22] Infusion of the selective beta-2 agonist albuterol (over 15 minutes) successfully lowered plasma potassium by 1.1 to 1.4 mEq/L in ESRD patients.[11,22] Allon subsequently examined the potassium-lowering effect of high-dose nebulized albuterol (10 mg and 20 mg) in a group of ESRD patients.[10,23] He undertook this study because intravenous albuterol was not available for use in the United States. A 0.62 mEq/L decrease in plasma potassium developed with 10 mg of nebulized albuterol, whereas a 0.66 to 0.98 mEq/L decline in plasma potassium occured with 20 mg of nebulized albuterol.[10,23] Unfortunately, a significant number of patients (30%, 6/20 patients) did not respond to nebulized albuterol.[10,23] It is possible that the aerosolized route of albuterol delivery accounts for the lack of response in some patients.

Acidosis/Bicarbonate

Potassium homeostasis is variably affected by changes in acid-base status. Several experimental studies have evaluated the effect of mineral metabolic acidosis on potassium changes in anephric dogs, cats, and rabbits.[24-27] In these animal experiments, an acute rise in plasma potassium occurs with the induction of metabolic acidosis.[24-27] However, acute infusions of sodium bicarbonate in these animals have produced contrasting results. Two dog studies revealed a decline in plasma potassium with bicarbonate administration,[27-28] while separate studies in cats and rabbits showed no change in plasma potassium following sodium bicarbonate infusion.[25-26] Interestingly, there are no data available to assess the effect of metabolic acidosis on plasma potassium concentrations in patients with ESRD.

The data on changes in plasma potassium concentration in ESRD patients treated with sodium bicarbonate are also somewhat contradictory. In a study published in 1977, a 0.6 mEq/L decrease in plasma potassium was noted to occur at four to six hours after sodium bicarbonate was administered to a group of hyperkalemic ESRD patients.[29] More recently, however, several prospective studies were undertaken to evaluate the usefulness of bicarbonate for the acute treatment of hyperkalemia in ESRD patients on hemodialysis.[30-32] All three studies revealed the absence of a decline in plasma potassium concentration within the first several hours following bicarbonate therapy, despite a significant increase in both pH and serum bicarbonate level.[30-32] Only one study demonstrated a decrease in plasma potassium, but this did not occur until four hours after bicarbonate infusion.[32] This information suggests that metabolic acidosis variably affects plasma potassium concentration and sodium bicarbonate is not useful (within one to two hours) to lower potassium in ESRD patients with hyperkalemia.

Acute Therapy of Hyperkalemia in ESRD Patients

Physicians should always be suspicious of the presence of hyperkalemia in ESRD patients who seek treatment in the ED. Symptoms of hyperkalemia can sometimes be obvious and quite impressive. However, serious hyperkalemia may also be present with only very subtle symptoms or signs. Rarely, ESRD patients may have absolutely no clinical evidence of this electrolyte disorder except for a history of dietary indiscretion or underlying diabetes mellitus (with hyperglycemia). A common symptom of hyperkalemia in these patients is nonspecific muscle weakness and generalized malaise. Severe muscle weakness (with preserved deep tendon reflexes), paresthesias, and rarely paralysis (ascending from extremities to trunk) may be seen in these patients when potassium levels are markedly elevated.[33]

Symptoms and signs referable to cardiac toxicity of hyperkalemia include weakness or dizziness from brady- or tachyarrhythmias which induce hypotension and cerebral hypoperfusion.[33] Cardiac monitoring may reveal an arrhythmia suspicious for hyperkalemia that can be subsequently evaluated and confirmed by a 12-lead electrocardiogram (ECG). Progressive ECG changes include a symmetrical increase (tenting) in the T waves (K^+, 5.5-6.0 mEq/L) in the precordial leads, lengthening of the P-R interval and widening of the QRS complex (K^+, 6.0-7.0 mEq/L), disappearance of the P waves (K^+, 7.0-7.5 mEq/L), and finally, the ominous sine-wave pattern (K^+, 8.0 mEq/L or greater). It is important to realize that the ECG changes noted above may occur at different concentrations (higher or lower) of potassium depending on comorbid processes and acuity of hyperkalemia.

The presence of coexistant metabolic perturbations such as hypomagnesemia, hypocalcemia, and hyponatremia will potentiate the toxic effects of hyperkalemia on the cardiac conduction system and potassium concentrations in the 6.0 to 6.5 mEq/L range can cause life-threatening arrhythmias.[33] Physicians working in the ED should presume the presence of severe hyperkalemia in all ESRD patients who present in cardiorespiratory arrest. In addition, patients with underlying cardiac disease (the majority of ESRD patients) may degenerate directly to a ventricular arrhythmia (ventricular tachycardia or fibrillation) in the absence of ECG changes.[33] Hence, therapeutic interventions should be undertaken to correct hyperkalemia when the serum potassium concentrations increase to levels in excess of 6.0 mEq/L.

Aggressive treatment of serious hyperkalemia is essential to assure patient safety and to avoid the untoward effects of this cation disorder on the cardiovascular and neuromuscular systems. The clinical laboratory should be instructed to report immediately all abnormal potassium values to avoid delays in the treatment of hyperkalemia in this population of patients. Since ESRD patients are at increased risk, it is important for physicians to apply the physiology of potassium homeostasis to medical therapy for these patients. With this in mind, the acute treatment of hyperkalemia in ESRD patients will focus on the use of calcium to stabilize excitable membranes, and the employment of insulin and beta-2 selective adrenergic agents to quickly lower potassium concentration through cell shift. The ultimate removal of excess potassium from the body with acute hemodialysis and a cation exchange resin (sodium polystyrene sulfonate) will not be discussed further in this review.

Once the clinician judges that therapy for hyperkalemia is warranted (plasma $K^+ \geq 6.0$ mEq/L, clinical manifestations, or ECG changes), immediate therapy should be commenced and directed at the following:

1) stabilization of excitable membranes and 2) reduction in plasma potassium concentrations by facilitating the movement of potassium from the extracellular to the intracellular fluid compartment.[33] At the same time as these maneuvers are undertaken, the nephrologist should be notified to allow early mobilization of the dialysis team. Stabilization of excitable cell membranes, in particular cardiac tissue, is the most urgent priority in the treatment of hyperkalemia. Intravenous calcium in the form of calcium gluconate (10% solution, calcium ion at 3 mEq/ml), or calcium chloride (10% solution, calcium ion at 13 mEq/ml), is the treatment of first choice and should be administered in a monitored setting (Table 1). The onset of calcium action is within one to three minutes, and the effect persists for approximately one-half hour.[33] If no effect is noted within five minutes following the first dose, repeat administration may provide benefit. ESRD patients who have been treated with digoxin should receive a slower infusion of calcium (calcium mixed in 100 ml of 5% dextrose) over 10 to 20 minutes.[33] It is important to note that calcium will effectively antagonize the effect of hyperkalemia on the membranes even in the presence of a normal serum calcium concentration.[33]

Table 1.—Acute Treatment of Hyperkalemia in ESRD Patients: Specific Guidelines

1. Calcium gluconate (10% solution), given as a 10 to 20 ml intravenous bolus. Calcium chloride (10% solution), given as a 5 mL intravenous bolus. Each may be repeated every five minutes, if ECG appearance does not improve. Calcium gluconate should be mixed in 100 mL of 5% and infused over 10 to 20 minutes if the patient has been treated with digoxin.
2. Regular insulin, 10 units plus 50% dextrose (50 mL), given as an intravenous bolus, followed by 10% dextrose at 50 mL/min until dialysis initiated. Check glucose levels at one to two hour intervals.
3. Albuterol (5 mg/mL), 10 to 20 mg, nebulized over approximately 10 minutes.
4. Combination therapy of insulin/dextrose and nebulized albuterol.
5. Acute hemodialysis (low potassium dialysate) to remove potassium.
6. Sodium polystyrene sulfonate (15 to 30 gm) plus sorbital (15 to 30 mL), oral ingestion or rectal administration.

Since the potassium-lowering effect of insulin is well-established and time-tested in both normals and ESRD patients, this hormone should be the next therapeutic choice following intravenous calcium administration. Regular insulin (Table 1) should be administered intravenously as a 10 unit bolus followed by 50 mL of intravenous 50% dextrose.[1-2] The beneficial effect of insulin is observed within 15 minutes and lasts approximately three to six hours.[1-2,7-9] Dextrose is given to prevent hypoglycemia in nondiabetic patients. However, since a high incidence of hypoglycemia occurs even with this regimen, it is prudent to infuse continuously 10% dextrose at 50 mL per hour and monitor blood glucose levels with frequent fingerstick monitoring.[1-2,33] Dextrose should not be infused before insulin because an acute worsening of hyperkalemia can occur with hyperglycemia.[1-2,33] Any maneuver which increases plasma osmolality (hyperglycemia, hypertonic mannitol, and saline) promotes a shift of potassium from the intracellular to the extracellular fluid compartment, thereby exacerbating hyperkalemia.[1,33] Diabetics with a glucose level above 200 mg/dL typically do not require dextrose, but they should also have frequent glucose monitoring.[1-2,33]

Administration of nebulized albuterol (Table 1), in a dose fourfold to eightfold higher (10 mg to 20 mg) than used to treat asthma, lowers potassium concentration acutely in patients with hyperkalemia.[1-2,21,33] In ESRD patients, the potassium-lowering effect of albuterol is less reliable as compared with normal controls.[1-2] In fact, as many as 40% of these patients have been resistant.[1-2,21] When effective, the plasma potassium concentration declines significantly at 30 minutes following albuterol inhalation and remains depressed for approximately two hours.[1-2,21,23] Although the theoretical concern about adverse cardiovascular effects exists with high-dose albuterol, no such ill-effects have been noted in studies performed in ESRD patients.[1-2,21,23] It is reasonable to conclude that nebulized albuterol may be useful in some hyperkalemic ESRD patients to lower acutely plasma potassium concentration, however, it should not supplant insulin as the most important therapy to move potassium into cells.

The combination of intravenous insulin and nebulized albuterol have been shown to be additive in the reduction of plasma potassium concentrations.[10] In a study which evaluated each therapy alone and then in combination revealed a decrease in plasma potassium of approximately 0.6 mEq/L for insulin (10 units) and nebulized albuterol (20 mg) alone.[10] However, in combination, these agents lowered plasma potassium by about 1.2 mEq/L.[10] This additive effect confirms those experimental studies which demonstrate separate pathways for insulin and catecholamines in the regulation of extrarenal potassium disposal.[34] *In vitro* observations in isolated rat skeletal muscle also confirm the additive effect of insulin and epinephrine on the movement of potassium into muscle fibers.[34] Therefore, it is worthwhile to combine these two therapies to more significantly lower plasma potassium concentrations in patients with severe hyperkalemia (Table 1).

Bicarbonate administration has been listed as a standard treatment for hyperkalemia in many textbooks. However, critical evaluation of the available literature suggests that sodium bicarbonate is ineffective as an isolated therapy to lower acutely plasma potassium.[1-2,30-32] Furthermore, in studies where bicarbonate infusion was demonstrated to lower plasma potassium in ESRD patients, the effect was not seen until at least four hours after treatment. Other studies confirm the utility of sodium bicarbonate therapy in the chronic lowering of plasma potassium concentrations, but not in the acute setting.[30-32] Of course, ESRD patients with a severe metabolic acidosis and concurrent hyperkalemia should receive bicarbonate (Table 1). Patients presenting with cardiac arrhythmias or cardiopulmonary arrest should also receive intravenous bicarbonate to reduce the cardiac toxicity of acidosis. In these settings, sodium bicarbonate (50 mEq) may be given intravenously to correct pH and serum bicarbonate levels in patients who are normocalcemic and can tolerate the sodium load.[33] Hence, it is safe to conclude that sodium bicarbonate infusion is not a useful treatment modality to emergently lower plasma potassium concentrations in the timeframe required for severe hyperkalemia, but may decrease the myocardial toxicity of acidosis.

Conclusion

As a result of their relatively anephric state, ESRD patients are a group at high risk of developing life-threatening hyperkalemia. These patients may present to the ED, often with clinical manifestations of severe hyperkalemia. It is valuable to summarize up-to-date recommendations, based on known potassium physiology and clinical studies in this population, for the treatment of this electrolyte disorder. Calcium remains a critical need for stabilization of excitable cell membranes. Intravenous insulin with glucose, acutely lowers plasma potassium concentrations via extrarenal mechanisms. The addition of high-dose nebulized albuterol may add to the potassium-lowering effect of insulin but is insufficient as solo therapy for hyperkalemia. Sodium bicarbonate infusion has a role only when severe metabolic acidosis accompanies hyperkalemia. Stabilization of cardiac tissue and extrarenal potassium disposal are critical interventions to buy valuable time until the initiation of techniques which remove potassium from the body can be undertaken. Dialysis and cation-exchange resins are ultimately required to accomplish this task. The ED physician plays a critical role in the care of hyperkalemic ESRD patients awaiting these definitive procedures.

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Comparison of Ultrasound and the Alvarado Score for the Diagnosis of Acute Appendicitis

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ABSTRACT—*Background.*—The Alvarado score assigns a numerical value to eight signs and symptoms associated with acute appendicitis. Practically speaking, the Alvarado score is equivalent to one's degree of clinical suspicion. Ultrasound is used in many institutions to aid in the diagnosis of acute appendicitis. The following study compares the accuracy of the two modalities and examines the value of using both modalities together.

***Study Design.*—This study is a retrospective review of all patients who underwent appendectomy for presumed acute appendicitis at our institution in 1995. Seventy-five patients had a preoperative ultrasound and all 94 patients received an Alvarado score from a retrospective chart review.**

***Results.*—Ten (10.6%) patients had a normal appendix removed. Ultrasound alone resulted in a correct diagnosis 87% of the time. Using the Alvarado score alone, a correct diagnosis was made 88% of the time. If the ultrasound alone were used for diagnosis, seven acute appendices would have been missed (10% false negatives) and three unnecessary operations would have been performed (4.6% false positives). If the Alvarado score alone were used for diagnosis, four acute appendices would have been missed (5.9% false negatives) and five unnecessary operations would have been performed (7.2% false positives). There were 45 true positives and no false positive results when both modalities were positive for appendicitis. When the Alvarado score was negative or equivocal, the addition of ultrasound decreased the false negative rate by 75%.**

***Conclusion.*—When comparing ultrasound to the Alvarado score for the diagnosis of acute appendicitis, neither one is significantly advantageous. However, the false positive rate is reduced to zero when both studies are positive and ultrasound improved diagnostic accuracy when the Alvarado score was negative or equivocal.**

There is no advantage of ultrasound over the Alvarado score for the diagnosis of acute appendicitis. Ultrasound is unnecessary when one's degree of clinical suspicion is high. However, the additional information provided by ultrasound does improve diagnostic accuracy in the case of a negative or equivocal Alvarado score.

Acute appendicitis is the most common surgical abdominal emergency with a lifetime prevalence of approximately one in seven.

Introduction

THE diagnosis of appendicitis can be difficult. Failure to make the diagnosis early can convert the relatively minor disease of acute appendicitis to perforated appendicitis, a disease fraught with potential complications including intra-abdominal abscesses, wound infections, infertility, and death.[1-2] The morbidity associated with a simple appendectomy is minimal, and therefore, in order to avoid the complications associated with a ruptured appendix, an acceptable number of normal appendices are removed. Current rates range from 3% to 20%, with higher acceptable rates of negative appendectomies among girls and women of child bearing age in whom the conse-

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Table 1.—Ultrasound Evaluation of Appendicitis

(+) Appendicitis	**(-) Appendicitis**
• Noncompressible appendix	• Compressible appendix
• Dilated lumen	• Not visualized

quences of a ruptured appendix are potentially severe. The relative risk of infertility is increased three to five times in a female patient with a history of ruptured appendix. There is no increase risk of infertility in female patients after a normal or inflamed appendix is removed.[1]

Many diagnostic studies have been evaluated to enhance the diagnostic ability of the clinician and decrease the number of negative appendectomies without increasing the rate of appendiceal rupture. Previously used radiologic studies include the barium enema and plain films of the abdomen. Plain films are unlikely to contribute to the diagnosis of acute appendicitis unless they show a fecalith. Barium enema, which has been reported to have an accuracy rate as high as 91.5%,[3] is an uncomfortable and invasive test and is no longer used regularly for the diagnosis of acute appendicitis. Recently helical computed tomography with oral and colonic contrast was shown to have a high accuracy for the diagnosis of acute appendicitis.[3] Radionuclide scans that detect inflammatory sites have been suggested and may be particularly useful for the negative predictive value.[4]

Ultrasound was introduced in 1981 as a diagnostic tool for acute appendicitis and is used routinely in some institutions. Unlike the previously mentioned tests, ultrasound is noninvasive and may be increasingly available as general surgeons and general practitioners incorporate ultrasound into their office evaluations. Ultrasound evaluation is usually performed with a 3.5 MHz transducer. The test is positive for appendicitis if the appendix is visualized but is not compressible. If the appendix is not dilated it may not be seen by the ultrasound, resulting in a negative examination (Table 1). A dilated appendix surrounded by free fluid is suggestive of a ruptured appendix, although this diagnosis is often not appreciated because a ruptured appendix may decompress and therefore be difficult to identify.

Table 2.—Alvarado Score

Symptoms	Migration	1
	Anorexia	1
	Vomiting	1
Signs	RLQ Tenderness	2
	Rebound Tenderness	1
	Fever	1
Laboratory	Leukocytosis	2
	Left Shift	1
Total		**10**

Alvarado, *Ann Emerg Med* 1996; 15:557

Table 3.—Probability of Acute Appendicitis using Alvarado Score

Score	**Appendicitis**	**Treatment**
>6	Probable	Operation
5-6	Unable to Rule Out	Observation
<5	Very Unlikely	None

The Alvarado score and ultrasound were both introduced in the 1980s to aide in the diagnosis of acute appendicitis.[5–8] The benefits of both tools have been evaluated individually. However the value of the two diagnostic modalities together deserves further attention. Ultrasound may be a useful tool in difficult diagnostic cases when the Alvarado score is not consistent with acute appendicitis.[9]

In 1986, Dr. Alvarado published a paper describing a numerical score for the early diagnosis of acute appendicitis.[5] Dr. Alvarado did a retrospective chart review of 305 patients who had been hospitalized with abdominal pain suggestive of acute appendicitis. Using Bayesian analysis, he assigned a numerical value to each of eight signs, symptoms, and laboratory values analyzed from this population (Table 2).

Table 4.—Accuracy of Alvarado Score for the Diagnosis of Acute Appendicitis

		Appendectomy	
		(+)	(-)
Alvarado	(+)	64 (85%)	5 (6.6%)
	(-)	4 (5.3%)	2 (2.7%)

He recommends immediate operation for a score greater than six and observation for a score below six (Table 3). Practically speaking, the Alvarado score is an attempt to assign a numerical value to the clinician's degree of suspicion.

Table 5.—Accuracy of Ultrasound for the Diagnosis of Acute Appendicitis

		Appendectomy	
		(+)	(-)
Ultrasound	(+)	62 (83%)	3 (4.0%)
	(-)	7 (9.3%)	3 (4.0%)

Materials and Methods

This is a retrospective case review of all patients who had a preoperative diagnosis of acute appendicitis and underwent appendectomy at Waterbury Hospital in 1995.

Ninety-four patients were included in the study. Patients' ages ranged from three to 79, with a mean age of 44. Sex distribution was essentially equivalent with 46 males and 48 females.

Ten patients (10.6%) had a normal appendix removed.

Seven patients had a ruptured appendix. The diagnosis of a ruptured appendix was made clinically in the operating room.

Each patient was assigned an Alvarado score calculated from his or her presenting signs, symptoms, and laboratory values. A score greater than 6 was considered positive for appendicitis. A score of 5 or 6 was considered equivocal, and a score less than 5 was considered negative.

Seventy-five patients had a preoperative ultrasound. Radiology records were reviewed and patients were categorized as having an ultrasound positive for appendicitis or negative for appendicitis (Table 5).

Results

Alvarado score.—Sixty-nine patients had a positive Alvarado score, six patients had a negative Alvarado score, and 19 patients had an equivocal Alvarado score.

Seventy-five patients had an Alvarado score that was positive or negative and not equivocal. *Using the Alvarado score alone, a correct diagnosis was made 88% of the time.* Eighty-five percent of correct diagnoses were true positives and 2.7% were true negatives (Table 4).

Twelve percent of the patients would have been incorrectly diagnosed if the diagnosis were made exclusively by the Alvarado score. Of the mistakes 6.6% were false positive resulting in the removal of a normal appendix and 5.3% of the mistakes were false negative, in other words a missed diagnosis of acute appendicitis.

Nineteen patients had an equivocal Alvarado score (5 to 6 range). Alvarado recommends watching these patients in the hospital overnight. Eighty-four percent of these patients had acute appendicitis.

Ultrasound

Seventy-five of the patients had a preoperative ultrasound. Using ultrasound alone to make the diagnosis, the correct diagnosis was made 87% of the time. Eighty-three percent of the correct diagnoses were true positive, and 4% were true negative. Thirteen percent of the patients were misdiagnosed by ultrasound. Four percent had a false positive result, and 9.3% had a false negative result (Table 5).

Discussion

Acute appendicitis can be a difficult diagnosis and missing the diagnosis can result in perforation of the appendix which carries significant potential morbidity. The surgeon's goal is to perform few unnecessary operations, but more importantly not to neglect operating for acute appendicitis before the appendix perforates.

From our study we found that if the Alvarado score alone were used to diagnose appendicitis, the correct diagnosis was made 88% of the time. The incorrect diagnoses would result in a negative appendectomy rate of 6.6% and a missed appendicitis rate of 5.3%. Removing 6.6% of normal appendices is appropriate, but missing 5.3% of acute appendicitis is unacceptable, and may have significant repercussions. However, all of the patients who had a false negative Alvarado score had a positive ultrasound. Therefore, the combination of the two diagnostic modalities resulted in a false negative (or missed appendicitis) rate of zero.

If ultrasound alone were used for diagnosis the correct diagnosis was made 87% of the time. Of the 13% of patients who were misdiagnosed, 4% had a false positive ultrasound and 9.3% had a false negative ultrasound. Six of the seven patients who had a false negative ultrasound had a positive Alvarado score, reducing the false negative rate to 1.5%. The seventh patient had an equivocal Alvarado score, warranting close observation and reevaluation.

Despite vast technologic advances, the diagnosis of appendicitis remains predominantly a clinical diagnosis. We have found ultrasound to be a useful diagnostic test when the clinical presentation is ambivalent.

Our study shows that ultrasound and the Alvarado score have an equivalent accuracy rate. However, using ultrasound as a screening test without the benefit of a clinical diagnosis would result in a high rate of missed acute appendicitis (9.3%).

Ultrasound was useful in diagnosing appendicitis in a number of cases in which the Alvarado score was low and also hastened the diagnosis in patients with an equivocal Alvarado score who traditionally would have been observed in the hospital overnight, or undergone an unnecessary operation.

In summary, we found ultrasound useful for those patients with a negative or equivocal Alvarado score to clarify or hasten the diagnosis of acute appendicitis.

This study was a thorough review of all patients who underwent an operation for acute appendicitis. The question that remains unanswered is the value of ultrasound as a screening study. The diagnosis of appendicitis is made by a number of physicians including surgeons, emergency room physicians, family practitioners, and pediatricians.

Our study had a significant bias as all our patients had a high enough suspicion for appendicitis to warrant an appendectomy. The next step is to determine the sensitivity and specificity of ultrasound evaluation in comparison to the Alvarado score, and perhaps recommend selective use of ultrasound based on the Alvarado score.

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Screening for Colorectal Cancer—United States, 1997

COLORECTAL cancer is the second leading cause of cancer-related deaths in the United States.[1] During 1999, approximately 129,400 new cases of colorectal cancer will be diagnosed, and 56,600 persons will die from the disease.[1] In 1996, the U.S. Preventive Services Task Force (USPSTF) recommended the use of specific screening tests (ie, annual fecal-occult blood testing [FOB:] and/or periodic flexible sigmoidoscopy for persons aged ≥50 years) to reduce colorectal cancer-related mortality.[2] In 1997, the American Cancer Society and an interdisciplinary task force developed guidelines that recommend one test or a combination of several tests for colorectal cancer screening.[3,4] To estimate the proportion of the U.S. population that received colorectal cancer screening tests, CDC analyzed data from the 1997 Behavioral Risk Factor Surveillance System (BRFSS) on the use of a home-administered blood stool test, or FOBT, and sigmoidoscopy/proctoscopy. This report summarizes the results of this analysis, which documents low rates of use of colorectal cancer screening tests.

In 1997, all 50 states, the District of Columbia, and Puerto Rico participated in the BRFSS, a population-based, random-digit-dialed telephone survey of the noninstitutionalized, U.S. population aged ≥18 years. A total of 52,754 persons aged ≥50 years were asked whether they had ever had a blood stool test (FOBT) using a home kit and whether they had ever had a sigmoidoscopy or proctoscopy, and when the last test had been performed. Responses coded as "Don't know/Not sure" or "Refused" were excluded from the analyses (approximately 3%). Data were weighted to the age, sex, and racial/ethnic distribution of each state's adult population using 1990 census or intercensal estimates. Proportions, standard errors, and 95% confidence intervals were calculated using SAS and SUDAAN. Data were aggregated across states. Aggregated and state-level data are presented for the proportion of respondents aged ≥50 years who reported receiving FOBT or sigmoidoscopy/proctoscopy.

Overall, 39.7% of respondents reported ever having had FOBT, and 41.7% reported ever having had sigmoidoscopy/proctoscopy. For this report, all results refer to tests received during the recommended time period (eg, during the preceding year for FOBT and during the preceding five years for sigmoidoscopy/proctoscopy).

A total of 19.8% of respondents reported having had FOBT during the preceding year, and 30.4% reported having had a sigmoidoscopy/proctoscopy during the preceding five years (Table 1). The proportion of all respondents who reported having had either test or both tests within the recommended time interval was 40.9% and 9.5%, respectively. Men were more likely than women to report having had a sigmoidoscopy/proctoscopy (35.1% and 26.7%, respectively), and women were more likely than men to report having had FOBT (20.9% and 18.3%, respectively). The proportion of American Indians/Alaskan Natives and Asians/Pacific Islanders who reported having had FOBT was less than that of whites and blacks (Table 1). Respondents identifying themselves as of Hispanic origin were less likely to report having had either test than respondents identifying themselves as non-Hispanic. The proportion of respondents who reported having had either test increased with each age group until age 70 to 79 years, then decreased among persons aged ≥80 years.

For both screening modalities, the proportion of respondents who reported having had a test increased with increasing education and income level (Table 1). The proportion of respondents who reported having had a test was greater for those with health-care coverage than for those without coverage. For persons without health-care coverage, 8.2% and 16.3% of respondents reported having had FOBT and sigmoidoscopy/proctoscopy, respectively, and 20.6% and 31.4% of those with health-care coverage reported having had the tests.

By state, the proportion of respondents who reported having had FOBT during the preceding year ranged from 9.2% (Mississippi) to 28.4% (Maine) (Table 2). The proportion of respondents who reported having had sig-

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moidoscopy/proctoscopy during the preceding five years ranged from 15.5% (Oklahoma) to 41.5% (District of Columbia).

Reported by: State Behavioral Risk Factor Surveillance System coordinators. Epidemiology and Health Sves Research Br, Div of Cancer Prevention and Control, National Center for Chronic Disease Prevention and Health Promotion; and an EIS Officer, CDC.

Editorial Note: Although screening can reduce mortality from colorectal cancer,[2–4] the findings in this report indicate low use of sigmoidoscopy/proctoscopy and FOBT, particularly within the recommended time intervals. Persons with health-care coverage, higher incomes, and more years of education were more likely to report having had these tests.

Table 1.—Percentage of respondents aged ≥50 years who reported having had colorectal cancer screening tests within recommended time intervals, by selected characteristics—United States, Behavioral Risk Factor Surveillance System, 1997

	Fecal occult blood test during preceding year			**Sigmoidoscopy/proctoscopy during preceding five years**		
Characteristic	**No.***	**(%)**	**(95% CI†)**	**No.**	**(%)**	**(95% Cl)**
Sex						
Men	3,432	(18.3)	(±0.8)	6,639	(35.1)	(±1.0)
Women	6,400	(20.9)	(±0.7)	8,039	(26.7)	(±0.8)
Race						
White	8,755	(20.1)	(±0.6)	13,068	(30.9)	(±0.7)
Black	681	(20.4)	(±2.1)	1,020	(29.8)	(±2.2)
Asian/Pacific islander	158	(11.5)	(±3.7)	224	(25.9)	(±7.1)
American Indian/Alaskan Native	75	(12.1)	(±4.3)	139	(24.4)	(±6.7)
Ethnicity						
Hispanic	378	(12.7)	(±1.9)	574	(25.5)	(±2.9)
Non-Hispanic	9,420	(20.3)	(±0.6)	14,043	(30.8)	(±0.6)
Age group (yrs)						
50-59	2,815	(15.5)	(±0.8)	4,106	(23.6)	(±1.0)
60-69	3,201	(21.8)	(±1.0)	4,667	(33.2)	(±1.2)
70-79	2,843	(23.7)	(±1.2)	4,383	(37.0)	(±1.3)
≥80	973	(20.1)	(±1.7)	1,522	(31.6)	(±2.0)
Education						
Less than high school	1,691	(16.2)	(±1.1)	2,743	(27.5)	(±1.4)
High school graduate	3,285	(19.3)	(±0.9)	4,737	(28.0)	(±1.0)
Some college/technical school	2,375	(20.5)	(±1.1)	3,490	(31.2)	(±1.3)
College graduate	2,454	(22.8)	(±1.2)	3,679	(35.9)	(±1.4)
Annual income						
<$10,000	706	(16.1)	(±1.8)	1,020	(24.9)	(±2.3)
$10,000-$24,999	2,709	(18.4)	(±1.0)	4,155	(28.4)	(±1.1)
$25,000-$74,999	3,678	(20.4)	(±0.9)	5,524	(32.1)	(±1.1)
$75,000	863	(23.0)	(±2.0)	1,378	(36.8)	(±2.3)
Yes	9,553	(20.6)	(±0.6)	14,179	(31.4)	(±0.6)
No	275	(8.2)	(+1.5)	490	(16.3)	(±2.1)
Total	**9,832**	**(19.8)**	**(±0.5)**	**14,678**	**(30.4)**	**(±0.6)**

*Numbers may not add to total because of missing data.

†Confidence interval.

Table 2.—Percentage of respondents aged ≥50 years who reported having had colorectal cancer screening tests within recommended time intervals, by area— United States, Behavioral Risk Factor Surveillance System, 1997

	Fecal occult blood test during preceding year			**Sigmoidoscopy/proctoscopy during preceding five years**		
Area	**No.***	**(%)**	**(95% CI†)**	**No.**	**(%)**	**(95% CI)**
Alabama	124	(14.3)	(±2.6)	251	(29.6)	(±3.4)
Alaska	53	(15.4)	(±5.1)	138	(33.0)	(±6.7)
Arizona	136	(16.9)	(±3.7)	244	(31.3)	(±4.5)
Arkansas	97	(13.4)	(±2.7)	168	(22.9)	(±3.3)
California	261	(16.4)	(±2.0)	533	(35.4)	(±2.7)
Colorado	157	(24.0)	(±3.6)	207	(30.7)	(±3.8)
Connecticut	193	(24.2)	(±3.3)	284	(35.1)	(±3.8)
Delaware	231	(22.5)	(±2.9)	370	(37.1)	(±3.2)
District of Columbia	123	(25.6)	(±4,4)	192	(41.5)	(±5.1)
Florida	385	(24.0)	(±2.3)	459	(28.6)	(±2.5)
Georgia	112	(14.8)	(±2.8)	269	(38.5)	(±4,0)
Hawaii	177	(21.6)	(±3.5)	280	(39.7)	(±4.2)
Idaho	333	(17.6)	(±2.2)	478	(26.1)	(±2.5)
Illinois	74	(14.4)	(±3.3)	147	(29.2)	(±4.3)
Indiana	129	(16.0)	(±3.0)	207	(23.9)	(±3.3)
Iowa	282	(18.6)	(±2.2)	399	(27.9)	(±2.6)
Kansas	165	(23.0)	(±3.3)	226	(29.9)	(±3.5)
Kentucky	283	(18.2)	(±2.2)	378	(25.3)	(±2.5)
Louisiana	100	(16.9)	(±3.2)	157	(26.2)	(±3.8)
Maine	184	(28.4)	(±3.7)	206	(32.0)	(±3.8)
Maryland	403	(25.1)	(±2.7)	386	(25.8)	(±2.8)
Massachusetts	150	(28.1)	(±4.2)	164	(31.0)	(±4.4)
Michigan	186	(22.4)	(±3.1)	296	(34.6)	(±3.4)
Minnesota	378	(21.9)	(±2.1)	669	(39.7)	(±2.5)
Mississippi	68	(9.2)	(±2.2)	173	(25.7)	(±3.7)
Missouri	148	(17.2)	(±2.9)	219	(29.6)	(±3.7)
Montana	117	(16.6)	(±3.0)	182	(25.4)	(±3.3)
Nebraska	214	(17.8)	(±2.5)	268	(24.1)	(±3,0)
Nevada	109	(10.7)	(±4,5)	228	(29.1)	(±6.2)
New Hampshire	143	126.8)	(±4.4)	163	(33.4)	(±4.4)
New Jersey	200	(21.7)	(±3.0)	271	(29.6)	(±3.3)
New Mexico	99	(15.0)	(±3.0)	178	(27.0)	(±3.7)
New York	291	(24.8)	(±2.8)	357	(31.7)	(±2.9)
North Carolina	370	(27.2)	(±2.6)	423	(30.8)	(±2.8)
North Dakota	110	(147)	(±2.8)	222	(30.2)	(±3.6)
Ohio	261	(18.4)	(±2.6)	433	(30.1)	(±3.0)
Oklahoma	96	(10.9)	(±2.3)	139	(15.5)	(±2.7)
Oregon	315	(23.9)	(±2.7)	399	(30.8)	(±2.8)
Pennsylvania	294	(22.0)	(±2.5)	421	(31.9)	(±2.8)
Puerto Rico	150	(16.1)	(±2.6)	183	(20.5)	(±2.8)
Rhode Island	151	(21.1)	(±3.2)	220	(32.7)	(±3.8)
South Carolina	141	(15.5)	(±2.6)	187	(21.2)	(±3.0)
South Dakota	133	(15.0)	(±2.5)	243	(27.9)	(±3.4)
Tennessee	190	(15.9)	(±2.3)	303	(26.5)	(±2.8)
Texas	154	(19.6)	(±3.1)	224	(27.5)	(±3.4)
Utah	106	(14.7)	(±3.3)	256	(30.2)	(±4.0)
Vermont	301	(26.6)	(±2.8)	314	(28.5)	(±2.9)
Virginia	240	(19.8)	(±3.4)	392	(33.5)	(±3.9)
Washington	306	(24.4)	(±2.6)	373	(31.1)	(±2.8)
West Virginia	139	(11.9)	(±2.1)	266	(24.8)	(±2.7)
Wisconsin	147	(17.2)	(±3.0)	271	(34.3)	(±3.8)
Wyoming	123	(14.3)	(±2.5)	262	(30.0)	(±3.3)
Total	**9,832**	**(19.8)**	**(±0.51**	**14,678**	**(30.4)**	**(±0.6)**

*Confidence interval.

The 1997 BRFSS was the first time questions about use of FOBT specified that the test was conducted at home using a kit. Previous survey questions did not address whether samples were obtained at home using a kit or as part of a digital rectal examination. The home kit is the recommended method of obtaining a stool sample.[3,5,6] Use of the home kit allows for collection of multiple samples and should be performed in conjunction with dietary restrictions to decrease the possibility of false-positive or false-negative results from certain foods and medications.[4,6]

Previous estimates of the prevalence of colorectal cancer screening practices using the 1993 BRFSS demonstrated that the rates of use of colorectal cancer screening tests were low.[7] Although direct comparison between these two analyses is not possible because the wording of the survey questions differed, the current analysis demonstrates continued underuse of sigmoidoscopy/proctoscopy. Both patient and provider barriers have contributed to the low rates of screening. Patient barriers may include lack of knowledge of screening recommendations, access to health care, anticipated discomfort, and embarrassment. Provider barriers may include lack of skills and lack of time to counsel patients.[2,8]

The findings in this report are subject to at least three limitations. First, because the BRFSS is administered as a telephone survey, only persons with telephones are represented. Second, results are based on self-reports and have not been validated. However, self-report of certain colorectal cancer screening tests appears to be valid.[9] Third, because the BRFSS questionnaire did not distinguish between tests conducted for diagnostic or screening purposes, the rates of use of these tests for screening purposes were probably lower than reported.

Activities relating to colorectal cancer screening are increasing at both the state and national levels. In 1997, the American Cancer Society and CDC established the National Colorectal Cancer Roundtable, a collaboration of state health departments, professional and medical societies, private industry, consumers, and cancer survivors to promote colorectal cancer screening awareness and activities. In 1998, the Health Care Financing Administration expanded Medicare coverage to include colorectal cancer screening. For average-risk persons aged ≥50 years, coverage will be provided for annual FOBT and sigmoidoscopy every four years, and for high-risk persons, coverage will be provided for colonoscopy every two years. Double-contrast barium enema may be substituted for either sigmoidoscopy or colonoscopy if requested in writing by the provider. Some commercial health plans also cover colorectal cancer screening.

The findings in this report underscore the need for efforts to increase screening for colorectal cancer. In response to low rates of use of screening tests, CDC is beginning a comprehensive health communication campaign to educate consumers and health-care providers about the importance of colorectal cancer screening and to encourage patients to discuss screening options with their providers. Public health officials, health-care providers, and commercial health plans need to intensify efforts to increase awareness of the effectiveness of screening and to promote the widespread use of colorectal cancer screening tests.

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Update: Influenza Activity—United States, 1998–99 Season

In collaboration with the World Health Organization (WHO), its collaborating laboratories, and state and local health departments, CDC conducts surveillance to monitor influenza activity and to detect antigenic changes in the circulating strains of influenza viruses. This report summarizes influenza surveillance in the United States from 4 October 1998 to 9 January 1999, which indicates that overall influenza activity was low.

As of 9 January, the 110 WHO and National Respiratory Enteric Virus Surveillance System collaborating laboratories in the United States had tested 20,972 specimens (by culture or direct antigen-detection techniques) for respiratory viruses. Of these, 401 (2%) were positive for influenza viruses; 293 (73%) were influenza A, and 108 (27%) were type B. Of the 95 (32%) influenza A isolates that have been subtyped, 93 (98%) were influenza A(H3N2) and two (2%) were influenza A(H1N1). Since October 4, all of the influenza A(H3N2) viruses antigenically characterized by CDC were similar to A/Sydney/5/97, the H3N2 component of the 1998–99 influenza vaccine. One influenza A(H1N1) isolate was antigenically characterized as an A/Bayern/7/95-like virus that is antigenically distinct from A/Beijing/262/95, the H1N1 vaccine strain. However, the 1998–99 A(H1N1) vaccine strain produces high titers of antibodies that cross react with A/Bayern/7/95.[1] All 15 of the influenza B viruses antigenically characterized by CDC are similar to B/Beijing/184/93, the recommended type B vaccine strain.

Since 4 October 1998, 41 states have reported laboratory-confirmed influenza. Influenza A(H3N2) viruses were reported from 24 states, influenza A(H1N1) viruses from two states, influenza B viruses from 26 states, and influenza A (not subtyped) viruses from 32 states. For the week ending 9 January 1999, New York City reported widespread* influenza activity, 10 states reported regional activity, and 35 states reported sporadic activity. The overall percentage of patient visits to sentinel physicians for influenza-like illness remained within baseline levels (0% to 3%) during the entire period. The percentage of deaths attributed to pneumonia and influenza reported by the 122 Cities Pneumonia and Influenza Mortality Surveillance System ranged from 6% to 7% and intermittently exceeded the epidemic threshold† for a combined total of five of 14 weeks, but has not remained above the epidemic threshold for >2 consecutive weeks.

Reported by: Participating state and territorial epidemiologists and state public health laboratory directors. World Health Organization collaborating laboratories, National Respiratory Enteric Virus Surveillance System collaborating laboratories. Sentinel Physicians Influenza Surveillance System. WHO Collaborating Center for Reference and Research on Influenza, Influenza Branch, Division of Viral and Rickettsial Diseases, National Center for Infectious Diseases, CDC.

Editorial Note: The findings in this report indicate that, despite institutional outbreaks in several states, this influenza season has been relatively mild. However, influenza activity has increased since mid-December and may increase during subsequent weeks. Although the optimal time for influenza vaccination is October through mid-November, influenza vaccine should still be offered to unvaccinated high-risk persons, health-care providers, caregivers, and household contacts of high-risk persons even after influenza activity has been detected in the community.

Reprinted from the *Morbidity and Mortality Weekly Report*, 22 January 1999; vol. 48, no. 2. Centers for Disease Control (CDC), National Institute for Health (NIH).

*Levels of activity are 1) *no activity;* 2) *sporadic*—sporadically occurring influenza-like illness (ILI) or culture-confirmed influenza with no outbreaks detected; 3) *regional* outbreaks of ILI or culture-confirmed influenza in counties with a combined population of <50% of the state's total population; and 4) *widespread*—outbreaks of ILI or culture-confirmed influenza in counties with a combined population of >50% of the state's total population.

†The epidemic threshold is 1.645 standard deviations above the seasonal baseline. The expected seasonal baseline is projected using a robust regression procedure in which a periodic regression model is applied to observed percentage of deaths from pneumonia and influenza since 1983.

All influenza A strains and most influenza B strains isolated in the United States that have been characterized by CDC are well matched by the 1998–99 influenza vaccine. A/Sydney/5/97-like (H3N2) viruses were the predominant influenza viruses isolated in the United States during the 1997–98 season and were isolated throughout 1998.[2–4] Even when the match between circulating strains and vaccine strains is good, outbreaks of influenza can still occur in vaccinated persons. Therefore, use of the antiviral agents amantadine and rimantadine in addition to influenza vaccination may help prevent and control influenza A but not influenza B, especially among persons at high risk for influenza-related complications and in institutions such as nursing homes.[5,6] These drugs are 70% to 90% effective in preventing influenza A infections and reduce the severity and duration of symptoms when administered within 48 hours of illness onset.

Commercially available point-of-care rapid diagnostic tests for influenza include one test that detects only influenza A virus and two tests that detect both influenza A and B viruses but do not distinguish between the infections. Rapid diagnostic tests for influenza in institutional outbreaks are most useful when used in conjunction with viral cultures. Rapid identification of influenza virus infection is important because prevention measures, such as cohorting and isolating infected and symptomatic persons, can be implemented more quickly.

Influenza surveillance data are updated weekly throughout the season. Summary reports are available through CDC's voice information system, (888) 232-3228, or fax information system, (888) 232-3299, by requesting document number 361100 and entering the telephone number to which the document should be transmitted, or through CDC's National Center for Infectious Diseases, Division of Viral and Rickettsial Diseases, Influenza Branch World-Wide Web site http://www.cdc.gov/ncidod/diseases/flu/weekly.htm.

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Tolterodine for Overactive Bladder

TOLTERODINE TARTRATE *(Detrol*–Pharmacia & Upjohn) is a new muscarinic receptor antagonist now being widely promoted for treatment of urinary frequency, urgency, and urge incontinence caused by bladder (detrusor) overactivity.

OTHER DRUGS FOR OVERACTIVE BLADDER—Older drugs for treatment of detrusor overactivity, which is the most common cause of incontinence in elderly patients, all have antimuscarinic activity. They include oxybutynin chloride *(Ditropan)*—probably the most commonly prescribed drug, propantheline bromide *(Pro-banthine),* hyoscyamine sulfate *(Cystospez M,* and others), flavoxate hydrochloride *(Urispas),* and the tricyclic antidepressant imipramine hydrochloride *(Tofranil).* Their use has been limited by antimuscarinic adverse effects, particularly dry mouth.

PHARMACOLOGY—Tolterodine and its major active metabolite, called DD 01, are muscarinic receptor antagonists that in animals are more active on the bladder than on the salivary glands (Nilvebrant L, et al: *Life Sci* 1997; 60:1129). Tolterodine is rapidly absorbed from the gastrointestinal tract. It is metabolized by CYP2D6 in extensive metabolizers (about 93% of Caucasians), forming DD 01, which is mainly responsible for the clinical effect. In poor metabolizers it is metabolized by CYP3A4, and the parent drug mainly produces the clinical effect (Postlind H, et al: *Drug Metab Dispos* 1998; 26:289; Brynne N, et al: *Clin Pharmacol Ther* 1998; 63:529). The half-life of tolterodine in extensive metabolizers is two to three hours and that of DD 01 is three to four hours. Both unchanged drug and metabolites are excreted in urine.

CLINICAL TRIALS—An analysis of four 12-week double-blind studies in more than 1,000 patients with overactive bladder found that tolterodine 2 mg b.i.d. decreased the mean number of incontinence episodes per 24 hours from 3.7 to 2.1, compared to 3.4 to 2.3 with placebo and 3.4 to 1.5 with oxybutynin 5 mg t.i.d. Volume voided per micturition increased by 22% with tolterodine 2 mg b.i.d. and by 32% with oxybutynin. Both drugs decreased the number of micturitions per 24 hours by about 20% (Appell RA: *Urology* 1997; 50:90).

ADVERSE EFFECTS—Adverse effects associated with tolterodine have included dry mouth, dyspepsia, headache, constipation, and dry eyes. In controlled trials, tolterodine-treated patients had a much lower incidence of dry mouth (40% *vs* 78%) with less severity than patients treated with oxybutynin (4% severe dry mouth *vs* 29%). Cognitive impairment and cardiac effects, which have been a problem with other antimuscarinic drugs, have not been reported with tolterodine, but the clinical trials with the new drug excluded patients with a history of "serious side effects" on oxybutynin. No clinically significant drug interactions have been detected. Tolterodine should not be used in patients with narrow-angle glaucoma or urinary retention.

DOSAGE AND COST—Tolterodine is available in 1-mg and 2-mg tablets. The recommended starting dosage is 2 mg b.i.d. with or without food, which can be lowered to 1 mg b.i.d. in some patients. For patients with markedly decreased hepatic function or in poor metabolizers taking drugs that inhibit CYP3A4, such as erythromycin or ketoconazole *(Nizoral),* the manufacturer recommends 1 mg b.i.d. A 30-day supply of *Detrol* at 2 mg b.i.d. would cost the pharmacist $73.88, compared to $57.89 for *Ditropan* 5 mg t.i.d., according to wholesale price (AWP) listings in *Drug Topics Red Book* 1998 and October *Update.*

CONCLUSION—Tolterodine appears to be tolerated better than older drugs for treatment of overactive bladder, but it may be less effective.

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Sources: *CareData Reports, Inc. NY, NY Survey of NYC and Northern Suburbs Region among HMO health plans offered by Aetna U.S. Healthcare, HIP, Oxford and PHS (FHS) Open Access, May-August 1998.

Special Report: Medical Megatrends, 1999

RICHARD L. REECE, MD.

> "All I know is what I read in the papers."
>
> Will Rogers

WHEN America rounded the 1 January 1999 date line and began its sprint down the homestretch towards the millenium, I decided the time has come to get a fix on medical megatrends. Here I shall identify underlying social trends likely to affect physicians' practices and lifestyles in 1999 and beyond.

These trends are likely to impact more on physicians in Connecticut and New England, because Anthem Insurance Companies and other major insurers, such as Aetna, Oxford, and Foundation Health are making a concentrated push to capture the New England market.[1] Most references cited in this report come from newspaper accounts, for reasons that will become apparent.

Content Analysis of Newspapers

John Naisbitt identified 10 megatrends in his 1982 book *Megatrends: Ten New Directions Transforming Our Lives* (Warner Books, New York, 1982). To define these megatrends, Naisbitt used content analysis of newspaper articles. Space in a paper devoted to news content is limited. For economic and deadline reasons, news space doesn't change much. Newspapers, like individuals, can address only so many social concerns at any one time. For example, if a rising preoccupation with diabetes fills news pages, AIDS coverage may fade. When new news is introduced, old news must be subtracted. Content analysis assumes forced choice in a closed system. Anybody who has worked for a newspaper knows only a limited amount of choice exists over which stories will appear. Editors are forced to choose.

Naisbitt's Predictions

Using content analysis, Naisbitt predicted in 1982 American society would go from:

1. An industrial society to an information society—from a society dominated by purchases of manufacturing goods to a society dominated by information.
2. Forced technology to high tech /high touch—from a society using technologies characterized by materialistic conformity (A TV in every home and a car in every garage) to one characterized by a balance between the material and the spiritual.
3. National economy to a world economy—from buying U.S. goods and stocks to purchasing the same things from across the globe.
4. Short term preoccupations to long term concerns—from concentrating on short-term daily living pleasures to long-term environmental impacts.
5. Centralization to decentralization—from national government to state and local governments; from running everything from national headquarters to dispersing authority from regional outlets.
6. Institutional help to self-help—from relying on institutions and professionals for your well being to taking responsibility for yourself.
7. Representative democracy to participatory democracy—from permitting Senators or Congressmen to set the agenda to letting people take charge by making rules through ballot initiatives.

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8. Hierarchies to networking—from organizations driven from executive suites, the "adminisphere," to organizations controlled by people on the ground talking to each other, sharing ideas, information, and resources.
9. North to South—from manufacturing and political power concentrated in the Northeast and the Midwest to new centers of business and political clout in the West, Texas, and Florida.
10. Either/or to multiple options—from take it or leave it choices (Ford or Chevy, vanilla or chocolate, marriage or divorce) to diversified lifestyle choices and goods.

In *Megatrends 2000* (Avon Books, New York, 1990), Naisbitt and his co-author, Patricia Aburdene, expanded on the 1982 work. They said "the great unifying theme at the conclusion of the 20th century is the triumph of the individual." Information technologies, they added, have enhanced individual power and eroded establishment clout. The "establishment" included corporate, medical and government institutions. In a final chapter, the authors concluded, "With the rise of the individual has come the primacy of the consumer. It has been said for many years: The customer is king. Now it is true."

Naisbitt's 1982 Health Care Megatrends

In health care, Naisbitt accurately foresaw shifts from:

- traditional medicine to alternative medicine,
- institutional care to outpatient care,
- hospital births to stand-alone birthing centers,
- from physician care to self-care,
- illness focus to wellness focus,
- prescription drugs to vitamins and herbs,
- rejection of medical technology to embrace of holistic medicine,
- dependence on the medical establishment for information to independent learning among individuals via the Internet and networking groups,
- physicians treating people as patients to engaging them as partners.

Bellwether States

In 1982 Naisbitt said most social invention occurred in five bellwether states: California, Florida, Washington, Colorado, and Connecticut.

If you look back over the last decade, you could make a strong case that most of the social invention in health care has occurred in those five states.

- California has led the nation in HMO market share, in percent of physician revenues from capitation, in number of doctors in large groups and IPAs, in the Independent Physician Movement—physicians not taking HMO patients, and in specialists leaving California for greener economic pastures elsewhere.
- Florida has spearheaded the nation in the proportion of elderly in Medicare HMOs; its legislature was the first to develop a statewide managed care strategy; and its state medical society was the first to develop a physician unionization section.
- Washington State citizens launched ballot initiatives on the medical use of marijuana and on physician assisted suicide, its physicians led in developing a statewide HMO for Medicaid, and a group of its physicians, the Medalia Medical Group, unionized against an integrated hospital system.
- Colorado ranked first in the Southwest in managed care market share, served as home of many major health care consulting firms, and produced major physician executives such as Malik Hasan, M.D., founder and former CEO of Foundation Health Systems, the nation's third largest health insurer, and William McQuire, CEO of United Healthcare, the nation's second largest health insurer.
- In Connecticut, the state medical society developed a successful statewide HMO (later sold to Foundation Health Systems) and sponsored a statewide MSO (a work in progress); the state legislature passed patients' rights assuring speedy appeal for denied care; and large HMOs consolidated (Aetna, headquartered in Hartford, became the nation's largest and most powerful health insurer); In addition, 150 primary care physicians organized a multi-site medical group (ProHealth in Farmington), 258 physicians in Middlesex county and Middlesex Hospital rejected a 1999 contract with a large HMO (ConnectiCare), and obstetricians and gynecologists across the state developed an organization (Women's Health USA) to provide management services to specialists in Connecticut and other states.[2,3]

Methodology

Naisbitt's method was a natural for me. I read six newspapers each day and record their health care contents in indexed logbooks. In a year, I accumulate about 1,500 articles relating to health care issues. I file them under appropriate categories.

From 1 November 1998 to 1 March 1999, I collected and categorized health care contents from three leading national newspapers—*New York Times, Wall Street Journal, USA Today*—and from three regional newspapers—*Hartford Courant, Miami Herald,* and *Providence Journal.* In this four month period, the two months at the Old Year's end and the two month's after the New Year's start, major health care news is often announced. Four months is enough time to get a fix on trends as reflected in newspaper reports.

Among 550 entries, 161 involved major health care restructuring or business calamities or cost issues, 120 were about consumer issues (diet, prevention, exercise, alternative medicine, Internet health Websites), 75 related to HMO reform and managed care backlash, 56 concerned prescription drug issues (29 involved excessive drug costs), 32 concentrated on physicians (their unhappiness, economic distress, or actions against HMOs).

Naisbitt's Original Megatrends

Here I compare Naisbitt's original megatrends in light of what's reported now about health care in newspapers. I also judge the megatrend impacts on lives of Americans and practicing physicians.

ONE, the shift from an industrial society to an information society—Naisbitt Impact Score—nine of 10 for American society, eight of 10 for practicing physicians.

Naisbitt was right on target. American society and the health care industry couldn't exist without computers. What Naisbitt didn't foresee clearly was that those who live by information also die for lack of information. Laggard and insufficient computer systems brought down Oxford Health Systems.[4] Poor information systems leading to lost claims and delayed payments were critical factors in causing physicians in six states to abandon Aetna HMO panels.[5,6] One thing Naisbitt could not have foreseen was the exploding Internet.[7] A 610 page book, "Health &Medicine on the Internet," even appeared,[8] doctors recommended medical Web sites,[9] and companies sent employees to Web sites for insurance and investment options.[10] One disquieting note was that abortion opponents targeted a "deadly dozen" abortion-performing physicians on a Web Site.[11] A jury ordered creators of the "wanted physicians" Web site to pay $107 million to Planned Parenthood and the targeted physicians.[12]

The Internet is here to say. It is rapidly changing everything it touches, and it is touching practically everything, including health care. Among physicians, an AMA survey showed 42% used computers at home or in their office, spend five hours a week on the computer; among those using the Word Wide Web, physicians spent nine hours; 45% expect their computer use to increase in the next year; 17% who use the Web have their own Web Site; and among those with a Web Site, 62% use their Web Site to advertise or promote their practice.[13] CNN, which runs about 32 health-related stories a day, linked up with WebMD, Inc, an health-care internet information site,[14] and George Lundberg, M.D., former Editor-in-Chief of *JAMA*, signed on as Editor-in-Chief of Medscape, Inc, which has more than one million subscribers.[15]

TWO, the shift from forced technology to high tech/high touch—Naisbitt Impact Score—eight of 10 for American society, eight of 10 for practicing physicians.

Again Naisbitt proved prescient. High tech/high touch was an expression Naisbitt used to describe how society responded to technology. Every time new technologies are introduced, he said, there was a corresponding human response, that is, high touch. In the health field, for instance, he noted the more we heard about heart transplants and CAT scans, the more we would want family doctors in the neighborhood. The more high technology we put into hospitals, the more we would want to stay out of hospitals. In 1997, more than twice as many Americans visited alternative practitioners as primary care physicians.[16] Now hundreds of thousands of Americans openly embraced herbal therapy,[17,18] foot magnets to relieve pain,19 diets to prevent and cure cancer,[20] and alternative healing as an "energy life force."[21]

THREE, the shift from the national economy to global economy—Naisbitt Impact Score—nine of 10 for American society, three of 10 for practicing physicians.

There's no doubt the American economy has become part of the global economy, particularly in the financial markets. But globalization has so far had little effect on U.S. health care, with the notable exception of the pharmaceutical and medical device industries.[22,23] Oh, it's true that Aetna has purchased an HMO in Argentina.[24] Still, in America, most health care is local: 90% of Americans seek health care within 12 miles of their home. Some health care is national. Physician practice management companies attempted and failed to nationalize physician businesses.[25] Six large national HMOs now exist.[26] The fact that nearly 20% of practicing physicians are foreign born is probably the most important global aspect of American medicine. A much smaller global impact comes from the influx of affluent foreigners to the Mayo Clinic and other prestigious American medical centers.

FOUR, the shift from short term to long term—Naisbitt Impact Score—four of 10 for American society, three of 10 for practicing physicians.

This megatrend may have been wishful thinking on Naisbitt's part. He said: "It is remarkable how willing American business people are to make the current quarter look better at the expense of the future ... Long-term planning has become a familiar theme in many business circles, particularly for companies operating global markets." Perhaps so. But today you see little evidence of long-term planning by business, government, or health care planners. Four exceptions may be:

- contingency plans by a Medicare commission to avoid Medicare bankruptcy in 2008,[27]
- pharmaceutical investors' studies of the long term future of the drug pipeline,[28]

- growing consumer recognition that planned long-term diets play a role in preventing cancer,[29]
- an understanding that it takes a systems approach to assure the safety of patients in hospitals.[30]

It's clear Wall Street and American businessmen have precious little patience with health care firms that don't meet their quarterly earnings projections.[31,32] As for physicians, it's still rare for physician groups to retain earnings in preparation for growth or a rainy day.

FIVE, the shift from centralization to decentralization —Naisbitt Impact Score—six of 10 for American society, six of 10 for practicing physicians.

In his 1982 book, Naisbitt argued centralized organizations would crumble across America. People would rebuild American from the bottom up, unions would disintegrate, Washington wouldn't matter, power would devolve down to the small towns, mid-sized cities, and states, and academic centers and hospitals would disintegrate as centers of the health care universe. In the newspapers of late 1998 and early 1999, news about academic medical centers largely faded from the news. In my survey, I found three articles on academia:

- one on academic centers in New York City fighting for cancer market share,[32]
- another on medical schools giving educational conferences for the public,[33]
- yet another quoting academic centers questioning the safety of Caesarian section rates.[34]

On hospitals, I found eight articles; four questioned hospital safety. Compare those numbers to the 120 devoted to consumer issues, 75 to HMO reform, and 32 to physicians. When consumers complain about HMOs and when physicians pull out of HMOs, they are reacting against centralization.[35,36] And when pharmaceutical patients go over the heads of the medical establishment to market prescription drugs, they're saying physicians are no longer an inviolable centralized power.[37,38] It can also be argued that the recent troubles at the American Medical Association represent medical establishment turmoil.[39,40] To a great extent, most of the currently described "paradigm shifts" are about decentralization:[41]

- From "command and control" leadership to autonomy of employees, consumers, and physicians. (HMO membership is dropping for the first time,[42] staff model HMOs are dead, integrated delivery systems are disintegrating by almost any measure, global capitation is stagnant at 6% of the population, consumers are voting with their feet for health plans offering choice, and physicians are competing with HMOs by offering to manage episodes of care with out gatekeepers, without utilization review, without risk pools, and without capitation,[43] and some argue that drugs are a major vehicle for decentralization by keeping people out of hospitals.[44]
- From land and energy as sources of value to information and knowledge.
- From economies of scale to unity of purpose.
- From hierarchies to self-organizing teams.

SIX, the shift from institutional to self-help —Naisbitt Impact Scores—eight of 10 for American society, six of 10, for practicing physicians.

In 1982, Naisbitt said Americans lost faith in the medical establishment and therefore could only trust themselves. This loss of faith, he predicted, would propel three movements involving the transition from institutional help (the medical establishment) to self-help (personal responsibility):

1. new health habits, such as running, to assure wellness and prevent future disease;
2. self-care to demonstrate self-reliance;
3. the triumph of holistic care and wellness over the old model of illness, drugs, surgery, and treating symptoms over the whole person.

To some extent, this has happened. Without medical establishment encouragement, consumers led by Baby Boomers have brought alternative medicine—acupuncture, massage therapy, and chiropractic—into the medical mainstream—and have created a huge industry by buying billions of dollars of multivitamins, anti-oxidants, dietary supplements, newsletters, books, and magazines on wellness; and by purchasing unbelievable amounts of herbal, over-the-counter, and prescription medications. Some believe that prescription drugs save $2.10 for every dollar spent in other kinds of health care.[44] The medical establishment has not totally bought into this brouhaha, although some doctors and some hospitals are forming "wellness centers," and academic medical centers are teaching complementary medicine. There are growing signs the wellness movement has hidden dangers and inherent limits. The dangers include herbal medicine toxicities and the questionable substitution of herbs for proven drugs when no scientific evidence exists for herbal effectiveness.[17,18] The limits include failure of wellness techniques, and Medicare HMO preventive strategies, to address problems of chronic disease in the elderly.[45] Medical politics may also slow this movement. The conservative medical profession looks with a jaundiced eye at many alternative practitioners as "snake-oil salesmen," and a recent October 1998 issue of *JAMA* devoted to alternative medicine was controversial in the AMA inner circles.[46]

EIGHT, the switch from hierarchies to networking.—Naisbitt Impact Score—seven of 10 for American society, six of 10 physicians.

When Naisbitt used the word "hierarchies," he was referring to top-down, command-and-control power structures, such as exists in the U.S government, General Motors, or the Catholic Church. Networks, he says, are people talking to each other, sharing ideas and creating resources, frequently through informal communication linkages as self-help groups, associations, or the Internet. Among physicians, networking is essentially what Independent Practice Associations, specialty societies, Medical Service Organizations (MSOs), and single specialty networks are about. These physician organizations are on the ground in the neighborhood, and in touch with the personal lives of their patients. That's why physicians in loose organizations frequently out-perform academic medical centers, staff model HMOs, and integrated delivery systems (hospitals, salaried physicians, and health plans under one corporate roof). And that's why Wall Street-backed health care firms, led by executives in distant cities poring over computer spreadsheets, are suffering from market-shock.[50–53]

NINE, the shift from North to South.—Naisbitt Impact Score—nine of 10 for American society, five of 10 for practicing physicians.

I won't dwell on this because it's self-evident. It's also self-evident that physicians go where the people and the opportunities are. In my own travels, I find midsize American Cities—Cincinnati, Austin, Salt Lake, Kansas City, MO, Jacksonville, Charlotte, Little Rock, Nashville, and others—are where physicians are thriving.[54] Although physicians tend to set up practices near where they're trained, physicians are becoming much more mobile and more like the rest of the population, 20% of whom move each year. In particular, I've noticed an increased migration to towns of 15,000 to 50,000, where incomes are higher and streets are safer. Here are the latest figures on where the population is moving.[55]

Top 10 Fastest Growing States—
Percent change in population from 1997–1998

State	1998 Population	% up from 1997
Nevada	1.7 million	+4.1%
Arizona	4.7 million	+2.5%
Georgia	7.6 million	+2.0 %
Colorado	4.0 million	+2.0%
Texas	19.8 million	+1.9%
Utah	2.1 million	+1.7%
Idaho	1.2 million	+1.6%
Florida	15.0 million	+1.6%
North Carolina	7.6 million	+1.6%
California	33.0 million	+1.5%

Source: US Census Bureau

TEN, the shift from Either/Or to Multiple Options.—Naisbitt Impact Score—seven of 10 for American society, six of 10 for practicing physicians.

Here Naisbitt was talking mostly about the transition from limited consumer and lifestyle choices to diverse choices. The world of limited choice is forever gone, of course, and we now have a myriad of choices in all aspects of our lives. Multiple choice options have come to health care, where more Americans are now joining "looser" forms of health plans, such as PPOs and Point of Service Plans, than more restrictive HMOs.

Although 85% of employed Americans are in managed care plans, most only have a choice of one or two health plans, usually an HMO and a PPO. Yet consumers want to choose how they treat themselves. That's why twice as many Americans visited alternative practitioners in 1997 as visited primary care physicians.[15] That's why consumers want to spend their money in the way they wish. The cold reality is dawning, even among federal policy makers, that the long-term escape from the present Medicare cost mess lies in giving consumers choice.[56]

Says a Wall Street Editorial:

"Both the FEHBP system, and a similar one offered by the California pension system, have shown they can control health-care cost better than Medicare. Most important, they go over well with consumers. Even in rural West Virginia, the FEHBP system offers 24 health-care options. In short, this isn't a radical change but is a practical plan tested in the real world."[57]

FEHBP gives nine million federal employees and retirees, including Congress members, a defined benefit (a set amount of money) to choose among hundreds of insurance plans. If the employee wants an expensive plan, they pay for it. FEHBP premiums have risen 40% less than plans offered by medium and large employees.[58] A variation of FEHBP are Medical Savings Accounts (MSAs). Employers and government already consider FEHBP and MSAs attractive models for cutting costs and are letting employers design their own benefits.

The implications of multiple consumer choice system for physicians is that doctors will be dealing with consumers spending their own money, shopping for price, comparing information, and asking questions. Physicians have to be prepared to demonstrate, in their actions, their service levels, and in their outcome data, that they offer more value in terms of quality offered for price.

Concluding remarks

What are the implications of these megatrends on practicing physicians?

- The orthodox managed care paradigm (top-down, command-and-control HMO techniques of cost control by limiting patient choice through selective contracting, gatekeeping; by compressing physician choice through preauthorization, utilization review, and protocols; and by controlling budgets through RBRVS and capitation) has been effectively killed by tidal waves of consumer and physician resistance. The orthodox managed-care paradigm will be replaced by a new managed-care paradigm, a second wave of managed care, characterized by emerging health organizations (EHOs) in which doctors have equity and financial responsibilities for controlling costs and by new forms of financing such as global fees for episodes of care. I am not alone in this opinion.[43,60]

- Consumers, possessed by an overwhelming desire to exercise choice, forearmed and forewarned by Internet Information, and limited by budgets imposed by MSAs and other defined benefit plans, will comparison shop for health care in earnest and with Internet-generated Information, just as they shop for automobiles, and will select those physicians they believe offer the biggest bang for the buck and the highest quality for the dollar.[58]
- What the current Medicare Commission decides on the future of Medicare will reflect the impact of these megatrends and effect the future of practice styles of physicians. Medicare's trust fund will run out of money by 2008 (compared to 2032 for Social Security) unless something is done. The Commission requires 11 out of 17 votes of its members to do something—with the make-or-break power being in the hands of two economic professors appointed by the White House: Stuart Altman of Brandeis University and Laura Tyson of the University of California in Berkley. If the Commission follows the megatrends, they will vote for more competition between a government fee-for-service plan (present Medicare), a low-cost private plan, a moderately priced private plan, and an expensive private plan with wide choices of doctor and low co-payment.[61] In general, the government would contribute a defined benefit, say 88% of the premium (varying from $636 to $720 for Medicare recipients). Whether this proposal will pass is unknown at this writing, 1 March 1999. Whatever passes will probably include some pharmacy benefits.[62] If HCFA should decide to pay for all DRGs using a methodology of global fees encompassing both hospital and all physician fees, which has been suggested as a possibility by Mark Wynn, Ph.D., Senior Analyst with the Division of Demonstration Projects at HCFA; it will transform the managed care landscape and shift power to physicians.[43]

The lives of Americans and practicing physicians have changed profoundly since 1982. The trends are generally along the lines predicted by Naisbitt in Megatrends. We have become an information society, we're now in a global economy, trust in government and the medical establishment has eroded, institutions are decentralizing, and much of the public has turned away from traditional medicine towards self-help and alternative practitioners. One trend Naisbitt did not anticipate was the relentless rise to dominance of managed care, but the first wave of managed care, command-and-control HMOs and Integrated Delivery Systems using capitation as a means of budgeting and cutting costs, is dying and will be replaced by bottom-up managed care organizations driven by consumers and physicians and hospitals, in that order.

Yet even in the face of these changes, the revenues of hospitals and incomes of physicians have climbed steadily. Medical costs surged again in the late 1990s. Demographic realities, the aging of the population, and social demands, access to modern medical technologies, are proving more powerful economic forces than cost-containing preventive and holistic approaches.

The public still trusts doctors. Indeed, according to Kleinke:

> The nation reveres physicians and resents challenges to their autonomy, clinical hegemony, and judgement. Their moral authority—earned through years of training and personal sacrifices that most Americans can comprehend only enough to be awestruck by it—is reinforced by the generally noble portraiture of physicians, warts and all, in generation after generation of medical television shows. Physicians have an intellectual incumbency that will reign in the end. Which stands in sharp relieve to the naked ambitions and hollow advertising of MCO (Managed Care Organizations) marketers.[60]

In the final analysis, offering consumers a defined amount of money, letting them make their own choice among multiple options, shopping for value among these options, and using their own money for more expensive options will bring market discipline to the US health system and will reduce costs.

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UNIVERSITY OF MARYLAND, BALTIMORE

CONNECTICUT STATE MEDICAL SOCIETY

INDEPENDENT PRACTICE ASSOCIATION

6,500 PHYSICIANS WORKING TOGETHER
TO PROTECT OUR RIGHT TO PRACTICE QUALITY MEDICINE

CSMS-IPA, FORMED IN 1986 TO PRESERVE QUALITY MEDICAL PRACTICE WITHIN THE MANAGED CARE ARENA, IS NOW THE MOST COMPREHENSIVE PHYSICIAN NETWORK IN THIS STATE

WE HAVE REAL VALUE

OUR AIM IS TO BECOME A POWERFUL ADVOCATE FOR PHYSICIANS BY WORKING TO SUCCESSFULLY MANAGE AT-RISK HEALTH CARE DOLLARS IN ORDER TO INCREASE REIMBURSEMENT AND WITHHOLD RETURN

SINCE JANUARY, 1999 THE IPA HAS:

* negotiated the inclusion of PHS membership in our existing 12-year contract with PHS/MDHP

* obtained commitments from the Plan to:

- resolve claims issues
- resolve phone problems
- provide data on a timely basis

* established an independent office to better serve physicians

* appointed five physician-friendly CSMS-IPA staff members

ON BEHALF OF THE NETWORK WE INVITE YOU TO PARTICIPATE AND WORK WITH US TO HELP PROVIDE SOLUTIONS TO OUR COMMON CONCERNS

Connecticut State Medical Society - IPA, Inc.
160 Saint Ronan Street, New Haven, CT 06511
Kenneth R. Lalime, Executive Director

Update on Addiction Medicine in the State of Connecticut

Mark L. Kraus, M.D., F.A.S.A.M., Chairman
CSMS Committee on Alcohol and Other Drug Dependency Education

From the *Statewide Interagency Substance Abuse Plan* submitted by the Connecticut Alcohol and Drug Policy Council to Governor Rowland and members of the Connecticut General Assembly:

> No other health or social problem impacts our society so widely and so profoundly as substance abuse. The total costs for alcohol and other drug abuse to the residents of Connecticut are estimated to be over $3.7 billion annually, or $1,140 for every man, woman and child. From youth to the elderly, substance abuse affects our families, schools, workplaces and communities. It places tremendous burdens on Connecticut's health, economic, social and justice systems.
>
> Every day in Connecticut, thousands of dedicated parents, teachers, social workers and many others face this problem head on. For all their good efforts, these committed individuals and professionals cannot be successful unless the statewide substance abuse system provides them with sufficient resources, effective tools and a well-structured, coordinated system of services.
>
> Investment in Connecticut's substance abuse service system is an investment in improved health and wellness of its cities and towns as well as in its citizens. Substance abuse prevention supports education. Youngsters who are free from the affect of alcohol or drug abuse problems—their own, or those of their caregivers—remain in school and can focus on their studies. Prevention and treatment contribute to healthier and safer cities. Both reduce crime and urban decay. Fiscal stress caused by social service, criminal justice and healthcare costs is also relieved. As with any kind of investment, wise planning and strategies must be employed to receive the maximum benefit.
>
> In October 1995, Governor John G. Rowland said, "A problem as costly to society as drug and alcohol abuse demands that government take every practical step within its sphere of authority and responsibility." Consistent with this belief, Governor Rowland established a Blue Ribbon Task Force on Substance Abuse, whose February 1996 report, among other points, recommended the formation of the Alcohol and Drug Policy Council.
>
> The Connecticut Alcohol and Drug Policy Council was created by Public Act 97-248. It is charged with examining and improving the statewide substance abuse system and developing a plan and action strategies to reduce the harmful effects of this complex and challenging problem.

It is with great pleasure and enthusiasm that I present to you an update on addiction medicine in the State of Connecticut from the disciplines of medicine, prevention, public health, and government.

Many physician members of the Connecticut State Medical Society have contributed of their time to help promote "good medicine" in the public policy arena.

As chairperson of the Connecticut State Medical Society's Committee on Alcohol and Other Drug Dependency Education, I am proud of the work of the committee which in summary has consisted of the following:

- A collaborative effort with the Connecticut Public Health Association (CPHA) to develop educational standards for the training of physicians and nurses in substance abuse screening. The CPHA and Connecticut Medical Society have been awarded a grant from the Robert Wood Johnson Foundation and the American Public Health Association to accomplish this task.

MARK L. KRAUS, M.D., F.A.S.A.M., Chairman of the Connecticut State Medical Society's Committee on Alcohol and Other Drug Dependency Education.

- A collaborative effort with “Drugs Don’t Work”—The Governor’s Prevention Partnership to develop substance abuse prevention strategies for underage drinking adolescents and for adults.
- Development of strategies to have educational materials pertaining to substance abuse/addiction prevention, intervention, and treatment placed in doctor’s offices in order to enhance patient’s awareness and education.
- Cooperation with the Connecticut State Medical Society’s Committee on Public Health and the Speakers Bureau to promote addiction medicine in the communities in which we practice.

April is Alcohol Awareness Month

CSMS Committee on Public Health
Constance T. Walker, M.D., Chair

April is National Alcohol Awareness Month, and the American Medical Association has designated 8 April 1999 as the first National Alcohol Screening Day.

National Alcohol Screening Day is designed to call attention to alcohol problems and to indicate that, like other illnesses, alcohol use disorders are identifiable and treatable. Screenings will be conducted through community health-care organizations and offered at college campuses nationwide.

As physicians, the members of the CSMS Committee on Public Health would like to encourage all of the Society’s members to incorporate alcohol screening in their patient history taking (whether they are young or old, male or female), screening, and, if necessary, brief interventions to help save lives.

The Connecticut State Medical Society is pleased to offer a convenient pocket-size card to assist physicians with the screening. The card, printed by the American Society of Addiction Medicine with financial support from DuPont Pharma, covers

- Screening
- CAGE questions (to probe for alcohol problems)
- Determining a Positive Screen
- Assessing a Positive Screen, and
- Plan of Action

To request a *Screening and Brief Interventions for Alcoholism* card, please contact Susan Schaffman at the Society, (203) 865-0587. Do your part to identify and care for your patients who may be at risk for alcohol-related problems.

Cooperative Actions for Health Program

Kathi Traugh and Mary Nescott
Connecticut Public Health Association

The Connecticut Public Health Association (CPHA) is proud to be collaborating with the Connecticut State Medical Society (CSMS) on an exciting, one-year project to improve the public’s health and clinical practice by facilitating the training of Connecticut health professionals in alcohol and substance abuse screening, brief intervention, and referral. The need for training and support materials was created by the passage of a new Connecticut law, PA 98-201. This law requires hospitals to screen trauma patients for alcohol and substance abuse, and asks health professionals to contribute to the development of model continuing education standards.

Clinical encounters offer a valuable opportunity to identify and address underlying health risks in patients, such as risky drinking and drug abuse. The objective of this project is to make it easier and less time consuming for clinicians to: elicit information from patients on their drinking and drug use, to briefly counsel patients about personal behaviors that are detrimental to their health, and to connect them, when appropriate, to community-based treatment programs. Professionals in a variety of disciplines and settings will soon benefit from research and materials generated by this project. These include:

- A needs assessment survey of Connecticut’s 31 hospitals to identify current substance abuse screening practices, and continue medical education and training needs
- A listing of available training programs and professional resources
- Templates for designing culturally appropriate educational materials for patients
- Regional resource directories for substance abuse treatment services.

The Connecticut Hospital Association, key state agencies, and other health organizations are assisting CPHA and CSMS on this project. Funding was obtained through a *Cooperative Actions for Health Program* grant from the Robert Wood Johnson Foundation. For more information on this project, contact Kathi Traugh at CPHA (203) 245-4614.

Connecticut College of Emergency Physicians

Stephen T. Holland, M.D., F.A.C.E.P., President

Traditionally, patients suffering acutely from alcoholism and drug addiction have been the bane of an emergency physician’s life. Ruling out other underlying medical illnesses and occult trauma is costly and time-consuming in a characteristically uncooperative and unappreciative patient. Those that are not acutely intoxicated can often be defensive about any questions related to substance abuse. It's been said that "it's easier to patch'em up and send them on their way" than to screen for dependency. That's not true, however. It's easier to do the latter … it's hardest to do both. Breaking with tradition and establishing a new paradigm of care for the addicted patient is not a goal, it's a direction.

A recent study that is helping to point the way was done by Gail D'Onofrio from Yale's Department of Emergency Medicine. This article[1] discusses the scope of the problem, both financially and in terms of morbidity and mortality. As with other illnesses, the emergency department presents itself as a common vector for many of these patients. Multiple studies have shown a higher percentage of alcohol and substance abuse among trauma patients and this information is not new or controversial. The focus of this study is the use of a brief interventional screening tool which can be used realistically in a busy emergency department setting.

The 1998 CT statute PA 98-201 makes it mandatory to perform screening on trauma registry patients from the emergency department. This is approximately 26,000 patients per year. The Connecticut College of Emergency Physicians is working with CSMS to see how brief, interventional screening tools can be used to screen the other 300,000 patients seen annually with minor trauma. This is obviously a more ambitious step and demands further study. Can it be done in inner city, community and rural emergency departments? How will referrals be conducted and what will be the follow-up? Will the intervention cause a drop in trauma and recidivism?

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[1] Donofrio G. Berstein F. Bernstein J. et al: Patients with alcohol problems in the emergency department. *Academic Emerg Med* 1998: 5:1200–17.

Connecticut Department of Mental Health and Addiction Services

Thomas A. Kirk, Jr., Ph.D., Deputy Commissioner

As both deputy to Commissioner Albert J. Solnit, M.D. in the state agency responsible for public mental health and substance abuse service, and, as co-chair with Senator Toni N. Harp of the Treatment Committee of the Connecticut Alcohol and Drug Policy Council, I am pleased to report the progress being made in Connecticut to confront the issue of prevention and treatment of substance abuse. The Council's recent (January 1999) report details over 90 recommendations that build on its previous work and that will serve as the policy map for Connecticut for at least the next three years.

The Council's plan is bold in its vision. It offers new efficiencies in service delivery, bringing innovative thinking to the forefront of state policy. Significant among these are "client-based models" which consist of a comprehensive, coordinated menu of services based on what the person needs rather than on the funder of a service. Models were created for woman and children, youth and families, persons with co-occurring mental health and substance use disorders, and criminal justice clients. These care models have the potential to drastically reframe not only how we deliver services but also the funding and outcomes associated with such care. Working together with the Governor and the General Assembly, the Council has broken down many barriers that historically prohibited state agencies from working effectively to address the health, social, and economic impacts of alcohol, tobacco, and other drug use.

My view is that one essential reason for the success of the Council has been our partnership with private sector members from the medical, university, and research communities. The Connecticut State Medical Society has been well represented. This collaboration has yielded the quality products of the Council and also led to significant new funds from federal and private sources such as the Robert Wood Johnson Foundation. These efforts, coupled with state funding and the spirit of the Governor and General Assembly, are building blocks for the next tier of extraordinary new gains. We would welcome more partners from the Connecticut State Medical Society as we proceed to the next phase. Join us.

Office Based Methadone Pilot Project

Richard S. Schottenfeld, M.D.

On Thursday, 25 February 1999, a physician in Waterbury, Connecticut became the first physician ever in Connecticut to prescribe and dispense methadone legally for the maintenance treatment of opiate dependence in a private medical office. Thus, history was made, albeit in a very small step. The Office-Based Methadone Pilot Project is aimed at evaluating whether utilization of physician offices for this treatment can improve access and reduce the stigma of treatment and demands on patients, while maintaining the effectiveness and safety of methadone maintenance treatment. After more than two years of planning and complicated negotiations among the various state and federal authorities regulating methadone maintenance treatment, the project is finally underway. Answers to the basic questions and protocol, for training physicians and expanding implementation of office-based methadone maintenance treatment are expected over the next year.

During more than three decades of use, the effectiveness of methadone maintenance for the treatment of opiate dependence has been repeatedly shown in randomized clinical trials, quasi-experiments (eg, evaluation of the effects of program closure), and clinical practice. Yet, access to methadone maintenance remains severely restricted—it is not available in a number of states (including Vermont for example)—and patients must often travel great distances in order to be treated in crowded clinics to receive treatment. For a long-term, successful methadone maintenance patient, attendance at the clinic may not only be inconvenient, stigmatizing, and threatening the patient's privacy; it may also be the only time the person comes into contact with active drug users entering treatment, or former drug-using buddies. An additional unintended harmful consequence of restricting methadone maintenance treatment to heavily regulated narcotic treatment programs is that drug abuse treatment has remained marginalized outside the mainstream of medical practice. As a result, most physicians have virtually no training or experience with methadone maintenance treatment and may not function as effectively providing medical care for their methadone maintained patients or advocating for their needs.

For the Connecticut pilot project, seven physicians in the Waterbury area volunteered to participate in intensive training sessions and then to take responsibility for prescribing and dispensing methadone maintenance in their office to a limited number of patients. Clients of the Connecticut Counseling Center, Inc. who meet stringent eligibility criteria, including prolonged abstinence from illicit drug use and social, vocational, and family stability while being treated with methadone maintenance are eligible for the Project. Eligible patients who volunteer for the project are randomly assigned either to receive methadone on a weekly basis from one of the physicians or to continue to receive their treatment in the Connecticut Counseling Center clinic. Training and clinical protocols for treating patients in physician offices were developed by drug abuse clinical researchers in Epidemiology, Internal Medicine, and Psychiatry at the Yale University School of Medicine and Addiction Training and Technical Center at Brown University. Staff of the APT Foundation Inc. will conduct assessments of patient outcome and health service issues. Funding for the project is being provided by The Center for Substance Abuse Treatment and the Connecticut Department of Mental Health and Addiction Services. Thus, in addition to being a noble experiment in trying to improve treatment for opiate dependent patients, the project also represents a remarkable collaboration of federal and state agencies, individual physicians, patients, and private and academic institutions.

Health-Care Providers Take Prevention Leadership Role

Susan Patrick, President,
DRUGS DON'T WORK!

Health-care providers, including hospital executives, HMOs, the Connecticut State Medical Society, the Connecticut Hospital Association, and the Connecticut Chapter of the American Academy of Pediatrics, have formed an unprecedented partnership to reduce underage drinking and teen drug use. Partnering with DRUGS DON'T WORK!, the Governor's Prevention Partnership, and the Connecticut Coalition to Stop Underage Drinking, they will engage in a series of activities designed to engage physicians in talking to parents about drug use and to mobilize communities to reduce underage drinking.

The effort was launched in October, Child Health Month, at a breakfast at the Children's Medical Center featuring Richard Yoast, Ph.D., Director of the Office of Alcohol and Other Drug Abuse at the American Medical Association. Over 200 underage drinking action kits were distributed to pediatricians and adolescent medicine physicians across the state as part of the AAP Child Health Month.

Upcoming activities include Inhalant Awareness Week from 21–27 March and the launch of the "Champions For Youth" campaign during April which has been designated as Underage Drinking Prevention Month. Health-care providers will sponsor community seminars, write editorials, and sponsor a billboard campaign. Champions For Youth Action Kits which feature a video, brochures, fact sheets, and an action guide may be ordered by calling The Coalition to Stop Underage Drinking at 860–523–8042, Extension 14.

Update on Addiction Psychiatry in Connecticut

Thomas Kosten, M.D.
President, American Academy of
Addiction Psychiatry

Three key issues are on the vanguard of interest for Connecticut's addiction psychiatrists: parity for psychiatry including substance dependence, health-care insurance, continuing treatment for patients on opioid substitution therapy, and evolving addiction treatments for gambling. The parity in health-care coverage for addictions has been a particular issue for psychiatrists because of the coverage for other major mental illnesses. This coverage has reflected an intellectual shift towards viewing depression and psychosis as brain diseases, not difficulties in living. A similar shift is occurring with addictions to opioids, alcohol, and stimulants being recognized as brain diseases, not moral failures, but the change is slow in public attitudes. Connecticut has been quite progressive in this area, but has still not attained parity in covering the health-care costs of these disorders. Ironically, the most difficult patients with schizophrenia or depression are those with "dual diagnoses" involving these two disorders with substance dependence. Without comprehensive treatment of both the substance dependence and the schizophrenia or depression patients with neither disorder can be successfully rehabilitated. The need for integrated treatment programs and coverage for the costs of both disorders is clear to practitioners, but apparently not yet to legislators.

The second issue relates to opioid substitution therapy specifically, but more generally applies to substantial time constraints on addiction treatments. Connecticut has taken a progressive and aggressive stance in controlling AIDS spread among drug users by eliminating methadone waiting lists. However, this methadone expansion is now shrinking as patients are being denied general assistance support for their treatment. This is most unfortunate because the alternative of return to opioid dependence and its associated crime have a much higher cost in the criminal justice system. The cost for a year of imprisonment is four to five times higher than a year of methadone maintenance. Moreover, outpatient treatment for substance dependence has been quite limited by third party insurance carriers in other areas besides methadone maintenance and this has degraded the outpatient alternatives to the much more expensive inpatient care that previously characterized the addictions treatment system.

The third issue of evolving addiction treatments for gambling is very important to Connecticut's addiction psychiatrists because of the vast development of gaming within the state. Many substance abusers have gambling disorders with recent surveys showing 20% to 30% rates of gambling disorders in alcoholics as well as stimulant and opioid dependent patients. Gambling has many similarities to obsessive compulsive disorder, which has been covered by health insurance expansions, but gambling needs public support for clinics to treat the poor who have developed this nonchemical dependence. Because of their training in both psychotherapy and pharmacotherapy, psychiatrists feel well prepared to address this disorder and those psychiatrists in addictions are quite concerned about the impact of gambling on the potential for broad psychosocial damage to their already fragile patients.

More questions than answers unfortunately, but the direction is clear. The studies being developed as part of this cooperative effort will seek to provide those answers and possibly serve as a model for emergency medicine throughout the country.

American Society of Addiction Medicine

Peter O. Rostenberg, M.D., F.A.S.A.M.
New England Director, ASAM

The American Society of Addiction Medicine (ASAM) is America's largest medical society dedicated to training physicians for a career in addiction medicine. It has a seat in the AMA House of Delegates, and the AMA recognizes addiction medicine as a specialty (ADM). Almost 3,000 ASAM physicians have met the Society's clinical requirements and passed its examination to become certified. ASAM publishes the *Journal of Addictive Diseases* and the textbook *Principles of Addiction Medicine.*

The Society is currently working toward Specialty Board Certification, parity in health-care benefits for addiction medicine, and it advocates for members' needs in Federal, State, and managed care arenas. It seeks full recognition of ADM by managed care and other benefit payers.

On a local and personally gratifying note, in 1995 Governor Rowland convened his Blue Ribbon Task Force on Substance Abuse because, as he said at the time, Connecticut could no longer afford to spend almost as much on the medical, criminal justice, and social costs of substance abuse as it does on education. Hundreds of people worked for thousands of hours to achieve progress. Subsequent changes in Connecticut's legislative and criminal justice cultures, innovative substance policies and laws, and the creation of more efficient delivery systems are all of historic import. And these changes have caught the attention of policy makers around the country, as well as in the addiction medicine field, including the Board of Directors of ASAM. Time will tell if there will be substantial changes in the medical arena, from prevention to increased quality and availability of brief screening that will help patients understand risks associated with abusive alcohol and other drug use.

Qualidigm Chosen to Lead National Heart Attack Care Project

Qualidigm, a Middletown, Connecticut-based medical quality improvement organization, has been selected to lead the National Acute Myocardial Infarction Project, an effort focused on improving the processes of care for seniors who suffer heart attacks (acute myocardial infarction, or AMI).

Qualidigm will work with the Health Care Financing Administration (HCFA) to coordinate the project, which focuses on evaluating the processes care for heart attack patients. Aspirin, beta blocker therapy, and lipid management are a few of the clinical areas that have been shown to have a positive effect in heart attack treatment and prevention. The project is designed to encourage physicians and hospitals to develop innovative ways to improve quality of medical care.

"Approximately one million people have heart attacks annually, and AMI is among the leading causes of hospital admissions for Medicare beneficiaries over the age of 65," said Martha Radford, M.D., Deputy Director, center for Outcomes Research and Evaluation (CORE) at Yale New Haven Health and a Clinical Coordinator at Qualidigm. "The goal of this national effort is to improve the processes of treatment of AMI which will lead to better outcomes for those Medicare beneficiaries who experience heart attacks." Dr. Radford and Dr. Harlan Krumholz, Director of CORE, will serve as Co-Clinical Coordinators for the AMI National project.

Qualidigm is a medical quality improvement organization (QIO) that works with Medicare, Medicaid, and other health care oragnizations. Acute Myocardial Infarction has been chosen by HCFA as a focus project. QIOs in nearly every state will participate in this project.

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50 Years Ago

From *The Connecticut State Medical Journal*

March 1949

A Connecticut Program for Hospitalization of the Indigent

WILLIAM H. HORTON, M.D.,
Medical Director, Office of Commissioner of Welfare, Hartford

I AM grateful for the opportunity to participate in this, the first conference of the trustees of the general hospitals of the State of Connecticut. I believe this occasion represents an opportunity for the general hospitals and the agencies of categorical welfare assistance to establish a mutually satisfactory working arrangement for the future in supplying the community needs for hospitalization. This problem is as yet unsolved, to my knowledge, in the United States. Our efforts, however, should not rest with seeking a solution of the problem of hospitalization of the indigent but should be pointed toward the larger problem of making hospitalization available for all who need it and, at the same time, assuring the hospitals that render the service a satisfactory financial position. I have recently concluded work on a committee appointed by the late Governor McConaughy to study the costs of hospitalization of State cases in State-aided hospitals. That investigation covered the greater part of last year. Early in its work it was apparent to the committee that the current costs of hospitalization are such, that any extended illness represents a financial burden which is crushing to all but a small minority of the population. The results of the study, therefore, are as much the concern of each individual citizen as they are to the State in determining the costs of hospital care for its beneficiaries.

This morning's meeting achieves for the first time a gathering from every part of our state of you ladies and gentlemen who are trustees of the general hospitals that must provide the greater part of the care necessary for those who need it. This meeting has the potential of setting up a practical program for the hospitalization of all who require it, regardless of their financial status, and further, that the hospitals themselves be fully reimbursed for the costs of such service. The future holds for you a truly amazing opportunity for expanded community service.

While this paper deals with a plan for hospitalization of the indigent on a statewide basis, I feel that you, as trustees, should be made familiar with the results of the study of Connecticut hospitalization which was accomplished by the Governor's Committee working closely with the members of a committee that represented the Connecticut Hospital Association. My conclusions are the result of the intensive work by the members of these two committees. While I have borrowed freely from my associates, I would not wish to indicate that the ideas expressed in this paper represent the exact feelings of anyone but myself.

I should like to consider the over-all problem in three steps: first, a general discussion of hospitals; second, some of the findings of the Governor's Committee as they were reported to the Governor; and, lastly, the practical solution or the plan for the hospitalization of the indigent. It will not be possible to entirely separate these topics, as all three are closely interwoven. I am most interested in conveying to you, if possible, the current thinking which our study brought to mind regarding Connecticut hospitals and their usage.

HOSPITALS

Non profit hospitals are public service institutions. They do not exist of themselves alone, but for the service which they may render the community. They exist through

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Presented at the Connecticut Hospital Trustees Conference, New Haven, January 25, 1949.

the generosity of the community expressed by direct contributions to fund raising campaigns, by endowments, and by voluntary services from both lay and professional groups. Towns and municipalities make further contributions by granting tax exemptions; the State makes its contribution in the form of financial grants in aid. These considerations are as they should be, for in my opinion non profit hospitals should remain independent and unfettered, operated by capable, well trained personnel under the direction of boards of trustees who are responsible members of the community.

Hospitals are currently facing a financial crisis. This crisis is of such magnitude that it may be said that the hospital problem in the State of Connecticut is actually a problem of hospital finances. Such considerations as shortages of beds or personnel with which to staff beds that otherwise would be available are decidedly other issues. The solution of these problems is predicated on the solution of the important financial problem. Unless the financial crisis in which Connecticut hospitals find themselves can be solved, their future is extremely uncertain. I propose, therefore, in this paper to deal with the financial situations in hospitals as I found them during the recent study by the Governor's Committee. Cursory review of the hospital financial situation often suggests three ready and easy solutions: first, the rates may be increased to whatever extent is necessary to compensate for the deficits; secondly, that the services which are available should be curtailed; and, thirdly, that subsidies should be requested from the State or other governmental agency to assure payment in full of the hospital bill of an individual when it has attained a certain arbitrary figure. We may dispose of the first two of these possible solutions very briefly. In the first instance, hospital rates to the general public cannot be materially increased with any prospect of full payment, since current costs as shown by the hospitals are beyond the possibilities of the incomes of the vast majority of our population. In the second instance, the curtailment of services which are essential to the proper treatment of the patient is not to be considered. The third solution, that subsidies should be requested from the State or other governmental agency to assure payment in full of the hospital bill of an individual when it has attained a certain arbitrary figure, seems to many the most acceptable, and by its very nature, certainly the easiest means of solving the current financial crisis. I do not believe that it is the proper solution to your problem.

The study of financial reports of Connecticut hospitals for the first six months of the year 1948 makes it clear that all the alternatives to subsidy by public funds have not by any means been tried. I suggest to you that until all other means of solution have been exhausted, the hospitals should not resort to this apparently easy solution. Regardless of the financial problems which face hospitals, the solution should not be sought in any expedient which, while aiding in the financial crisis, will ultimately restrict the free operation of the hospital in the best American tradition. Experience shows that it is seldom that large sums of money are forthcoming in a truly eleemosynary way. Human nature being what it is, there are usually substantial, though at times not very apparent, strings attached to financial assistance. It would probably be equally true in this instance for the rather simple reason that a general rule of practical politics is, that the more government is expected to contribute financial support to an enterprise, the more that enterprise must expect governmental intervention, or at least supervision. Thus, I feel that I should urge you to set aside this seemingly easy solution which may seem desirable and instead concentrate on the more difficult, but at the same time more sound method, of looking to the efficiency of the operation of your hospitals and the reduction of costs of operation through the achievement of greater efficiency. If you will undertake this obligation as trustees of your community hospital, then I am certain that the plan for hospitalization which I will presently offer you will succeed. If this step is not undertaken, then my plan nor any plan based on sound business principles which do not interfere with professional services will not succeed. I would urge you to consider this matter carefully.

It is pertinent in this regard to cite a personal conviction that the financial operations of hospitals should not differ materially from the financial operations of any of the manufacturing corporations in the State of Connecticut. The fact that hospitals are non profit corporations is often mistakenly thought to mean that hospitals must operate at a loss. Nothing could be further from the truth. The title "non profit" is no mandate that the hospital must necessarily lose money by its activities. The title "non profit" merely indicates that the financial operations of the hospital shall not accrue personal financial benefit to any individual. Many of you gentlemen who are the trustees of Connecticut hospitals operate your own businesses, and others are directors of our corporations. If I were asked to summarize the greater part of this paper in a single sentence of recommendation to you, as trustees, it would be that you insist that the financial operations of your hospital meet the same standards that you require in private corporations or in your own business. In the case of large corporations, financial dividends to stockholders are the measure of successful operation. In your status as trustees of community hospitals, low cost operation of necessary services represents a dividend in humanity to every citizen of the state when occasion requires his use of the hospital.

Connecticut corporations have, since their beginning, prided themselves upon their independence, initiative, and long records of successful operation; some in excess of one hundred years with an unfailing production of dividends. This record was not achieved through the many financial crises of the last century by the adoption of such easy solutions as requesting government subsidy to assist operations; nor was it accomplished by raising the price of the product manufactured or offered for sale. The record of successful operation of manufacturing corporations in Connecticut was attained by increasing the efficiency of operation, by lowering the costs of the product and by offering the product to the public at a price which was within the reach of all of the population. This was the objective of my earlier thought that the operation of your hospitals should be along the same lines as your businesses. There has been much discussion during the past year regarding the ability of hospitals to account their activities as satisfactory as do corporations. I have not discovered any significant reason why the cost control of many thousands of items, which is a routine procedure in many of our large manufacturing organizations, could not be applied to the few hundred items which must be subjected to cost analysis in hospital activities. In a day when hospitalization was possible at $4 and $5 a week, there was no necessity for rigid supervision of operating costs, no more than the early days of manufacturing required such control. When many hospitals are showing over-all per capita costs of about $15 per day, however, cost analysis is as mandatory as it has been found to be by industry in order to survive in competitive manufacturing. While hospitals do not compete for business, there should be a very definite competitive spirit among them to produce the lowest cost hospital service consistent with good medical treatment. Public and private financial support should properly go to the hospitals who best achieve this objective. In so doing, hospitals will fulfill their primary purpose and make possible the benefits of treatment without subjecting the individual who requires hospitalization to financial embarrassment with a resulting decrease in his personal independence.

Now what are some of the considerations which indicate that Connecticut hospitals have not reached the peak of efficient operation. The first consideration is necessarily the accounting systems currently in use.

A. Accounting in Hospitals

Apparently it has been a byword for many years among those who have studied Connecticut hospitals that the hospitals do not operate on uniform accounting systems. Despite this observation and also despite the fact that in 1929 the General Assembly of the State of Connecticut made it mandatory that all hospitals receiving: financial grants in aid to account according to the methods of the American Hospital Association, little seems to have been done about it. In our recent study, however, we were able to produce a factual picture. I should like you to know that of the 33 State-aided hospitals which were studied, only six hospitals were able to submit statements which demonstrated departmental profit and loss figures from which the basic figure of interest to the State authorities could be derived, namely, the cost of room, board, and ordinary nursing care of a patient in the general wards of the hospitals. We did not expect all hospitals to be able to thus show their costs of operation. Among the smaller hospitals it was not to be anticipated; but in the larger hospitals it should have been available. I must add at this time that we expect that the reports of the last six months of 1948 will materially increase the number of hospitals which offer satisfactory statements. Despite these considerations, it is necessary to state the point that since 27 of the general hospitals of Connecticut were unable over that period to demonstrate their specific costs of operation of the various types of day rate and special professional services, they must necessarily have no means other than arbitrary judgment to establish the charges for the services they offer. Justification of such charges might be difficult.

As a further development of this study, within the six hospitals who were able to demonstrate departmental profit and loss figures, the analysis showed uniformly that the hospitals lost money in operating and delivery rooms, and, conversely, made money in x-ray and laboratory services. This situation can only mean that despite the fact that departmental profit and loss figures were at hand, the individual charges for the use of these four facilities bore no relation to the cost of producing the services. To develop the point further, it likewise means that the profits which accrue from the operation of the x-ray and laboratory departments were eventually used to subsidize the deficits which occurred in the operating and delivery rooms. Upon analysis, this, in turn, shows that persons who used x-ray or laboratory facilities and did not use the operating or delivery rooms were, in their final bill, paying charges for services which they did not receive. Likewise, that those who used the operating and delivery facilities were not charged the costs of the services which they utilized. This type of financial procedure is a basic difficulty in the present accounting and charge systems of Connecticut hospitals.

B. Variation in the Costs of Ward Care

In the costs of ward care which were determined, three major hospitals of comparable size had rates which varied from $4.56 to $7.28 to $12.28. These three widely separated figures occurred within a radius of 25 miles. Since these costs are only those for room, board, and ordinary nursing care, it is indeed difficult to understand such wide variation.

There has been considerable newspaper publicity during the past two years regarding the huge deficits which were being created in certain State-aided hospitals by the care of State patients. The figures which were used in demonstrating these deficits were arrived at by calculating the difference between the statutory rate of $5 and the over-all calculated per capita cost in the respective hospitals. This figure was then multiplied by the State patient days and resulted in an amazing deficit. This procedure has one major weakness. Over-all per capita cost figures represent merely the average cost of caring for all patients in the hospital in all types of accommodations during any period. Since State cases utilize hospital facilities only on the ward level, which is the most inexpensive of the several day rate services, there is no reason why the State should in any circumstance undertake the payment of an over-all per capita cost which contains part of the cost of operating semi-private and private facilities. While it is true that State cases are being paid for at the moment at lower rates than those which are charged by the hospital to other individuals, there is satisfactory evidence that hospitals are not in a position to indicate exactly how much it does cost them to care for a State patient *or any other patient.*

In this connection, I think it is important for us to know that cases which are hospitalized under the aegis of the State Welfare Department utilized less than 5 per cent of all the hospital beds used in Connecticut in the first six months of 1948. To this consideration must be added the fact that two other major contract users of services in Connecticut State-aided hospitals, the Blue Cross and the Workmen's Compensation Commission, were and are provided with services at less than the cost of providing those services *as the costs are shown by the hospitals.* Surely the State, which deals only in public funds, has no reason to pay the full cost of per capita care, when private insurance carriers and independent corporations are permitted to obtain services at less than the cost of providing those services.

C. Allowances and Bad Debts

Another finding, and by no means the least significant of our study, was the demonstration of the part which bad debts and allowances play in the financial statements of the hospitals. I was very much interested to learn that in the first six months of 1948, 27 of the State-aided hospitals of Connecticut showed a loss of only $417,000, an average of approximately 36 cents per patient day. I was amazed that during this same period, the same hospitals allowed $1,125,000 of legitimately earned revenue to go unpaid. I would be the last to deny medical care to any and all who require it to the maximum of our ability to provide it. I cannot, at the same time, feel but that there is a basic error in the operation of our hospitals when, in the over-all picture, the mere collection of 40 per cent of their allowances and bad debts would have permitted all hospitals to operate without deficit.

D. State Grants

Early in the hospital study it was the opinion of the Governor's Committee that the financial grants in aid by the State to the general hospitals should be revised to give them some legitimate basis for the amount awarded in each instance. It was decided to recommend to the Governor that a preamble be inserted in the statute which awarded the grants to indicate the purposes for which the grant was made. This step seemed indicated in view of the widespread disparity of opinion as to whether the grants constituted financial assistance to the hospital in meeting certain problems or whether it was a drawing account for the costs of per diem care which were in excess of the statutory rate. For this reason, the following recommended statement of purpose of State grants was submitted to the Governor. It was unanimously approved by the members of the Connecticut Hospital Association Committee as well as by the Governor's Committee.

"Appropriations to general hospitals are for the purpose of providing funds to enable the hospitals to increase their charitable services to the public; to assist in maintaining adequate emergency medical services in communities throughout the state; to defray, in part, the general operating expense of the hospital as an humanitarian community institution; to aid in expanding existing facilities for the medical care of charity patients; and for such other purposes as will promote the general health and welfare of the community."

If this statement of purpose of the grants should be made into the law by the current General Assembly, it will be an extremely valuable step in delineating future action regarding the grants and the purpose they are intended to serve. In addition to the statement of purpose, we felt that the specific amounts of the grants should be revised on an orderly and easily understood basis. The final result of this thinking was to propose that the State grants be awarded on the basis of a fixed basic amount for each hospital plus an additional amount for each bed which was available for use by the general public as of June 30, 1948. There was not agreement between the Connecticut Hospital Association Committee and the Governor's Committee as to the specific amounts. In the report to the Governor the recommendation was made by the Governor's Committee that the basic amount should be $5,000 plus $25 for each bed. In arriving at the amounts which should be paid, and if one wishes to do away with ceilings as was the feeling of the Governor's Committee, one is confronted with two alternatives, either to use a large basic amount and a smaller amount per available bed, which benefits the smaller hospitals; or to use a smaller basic amount and a larger award per available bed, which benefits the larger hospitals. Whatever amounts are arrived at by the General Assembly will depend on their decision as to which of these alternatives will be accepted.

Having explored some of the difficulties which seem to beset our hospitals, let us see what constructive steps may be taken to effect their correction. I feel that the indigent of the State of Connecticut who are beneficiaries of categorical relief agencies should be hospitalized in the general hospital of their choice and that the hospital be paid in full the costs of such service. This, in a sentence, is my Connecticut plan for the hospitalization of the indigent. There are, however, some contingent factors. I proposed this plan *only* on the basis that all other users of Connecticut hospitals likewise pay the full costs of their care. It was the object of the Governor's Committee in its study of hospital costs to determine the actual costs of providing each individual type of day rate service, ward, semiprivate, private, and nursing, and each specific type of the special professional services, operating room, delivery room, x-ray, laboratory, physiotherapy, and others. I am convinced that unless hospitals actually know the costs of providing any particular type of service or combination of services and that they charge that figure to the user of such services, and are *paid in full that amount,* they cannot escape deficit operations. The assumption of the payment of the full cost of care of patients creates a definite responsibility on the part of the hospitals to enforce efficient operation of their institutions. All costs of operations in hospitals which are not directly applicable to the care of the patient or to a specific service rendered the patient must be eliminated from the charges which will be made to the patient based on the costs of supplying the service. The costs of educational and research projects must be separately identified and the costs of such endeavors presented to the general public or to the State as such. Both of these projects are very much worth while, and it is not my intention to minimize their importance, but I should like to insist that the costs of maintaining these necessary services be distinctly separated from the costs which accrue from patient care. The comparative studies which will be possible when all hospitals show complete departmental income statements will readily indicate hospitals which are operating at less than the peak of efficiency. In this regard, until the actual costs of the hospitalization of State cases can be demonstrated, the State of Connecticut must pay an arbitrary figure. *This procedure is obligatory, since the expenditure of public funds does not permit the State to pay for services, the charges of which are not substantiated.* I did not, when the Governor's Committee was active, nor do I now recommend that the State should pay for the care of its patients the over-all per capita cost currently shown by the hospitals. I am, however, not only willing but anxious to advocate the full payment of costs in conformity with the plan I have offered here.

It was a premise of the Governor's committee, concurred in by the Committee of the Connecticut Hospital Association, that in no case should the State be obliged to pay charges for the care of its beneficiaries in excess of the rates which are allowed to other individuals or agencies. This premise is sound, since all State patients are indigent and it would not seem reasonable that their care should be paid for at rates in excess of those which are given to other patients who must necessarily be in some degree self supporting.

This, then, is the plan which I submit for your consideration. Briefly, that the accurate costs should be determined, that they should reflect the maximum of efficiency of operation, and that the hospital be paid in full the charges which would be derived from the actual costs of producing the services.

There is, of course, one further consideration and that is how the costs of hospitalization are to be met. There are only two types of persons, the indigent and the self supporting. We may dispose of the hospital care of the indigent according to the plan we have just outlined, in which the State will be fully financially responsible for the care of its beneficiaries. We may likewise dispose of those who use our hospitals under the sponsorship of either the Blue Cross, Workmen's Compensation, or other contractual agencies, for if this plan is to be instituted, they, like all other users, must pay the full costs of care of their members, or beneficiaries. This reduces our problem to a final consideration of persons nominally self supporting who may or may not be able to pay the costs of their hospitalization. The solution to this problem lies, I believe, in the following four steps.

1. The aggressive collection by the several hospitals of their delinquent accounts with individual citizens. I believe that the totals of bad debts and allowances for the first six months of 1948, as previously stated, leave no conclusion possible except that hospitals must rearrange their collection procedures to materially reduce the so-called non collectible accounts. While it is not my wish to collect hospital bills at the expense of pauperizing the individual, I do feel that he should, to the maximum of his financial capacity, pay his hospital bill in full or in part, even if arrangements must be made for extending credit over a long period of time. It would still constitute a good business procedure. Estimates of the financial capacity of individuals should be based on the same sound business considerations which are applied to the individual who

seeks credit for the purchase of non essential items. In this regard I think it is pertinent to remind you that gross public expenditures in 1947 showed the expenditure of almost five times as much money for such items as alcoholic beverages, tobacco, and cosmetics, as for the entire bill of hospital and medical care. With this fact in mind, it is obvious that many medical and hospital bills are going unpaid when individuals have sufficient funds to purchase items for their material pleasure.

2. Free beds which are subsidized by contributions or endowed funds should not be used for the care of beneficiaries of categorical welfare assistance. Unless the restrictions by which they were established require otherwise, they should be reserved for the use of self-supporting persons in the marginal income groups who would otherwise be forced to become beneficiaries of welfare agencies. The monies from general fund raising campaigns and local community chests should be allocated to increasing the number of such beds that are available for this group. As an alternative, these monies should constitute a fund for the payment of the bills of the truly medical indigent.

3. If, in the opinion of the hospital, the individual is unable to pay his bill and neither free bed nor medically indigent funds are available, he should be referred to his town welfare agency and the hospital should promptly notify that agency of the situation. Section 2585 of the General Statutes, Revision of 1949, states:

"All persons who have not estate sufficient for their support, and have no relations of sufficient ability who are obliged by law to support them, shall be provided for and supported at the expense of the town where they belong. Each town shall maintain and support all the poor inhabitants belonging to it, whether residing in it or in any other town in the State."

Section 2595 of the General Statutes also deals with those in need of aid when persons are in towns other than the town in which they reside.

Finally, section 2606 provides that when persons do not have settlement in any town, the town of their residence will be reimbursed by the Division of State Aid of the Office of Commissioner of Welfare for their care.

Under the provisions of these laws, the hospital may be reimbursed in full for the care of the individual. Hospitals should take full advantage of these statutory provisions of financial assistance. The statutes quoted do not permit the town to deny financial aid to the individual except on the grounds that he has sufficient funds to disqualify him from welfare assistance. If such should be the case, when the hospital receives this report, it should be considered prima facie evidence that the amount is collectible and it should be aggressively pursued and collected. This system for the collection of delinquent accounts should not be misinterpreted by the hospital authorities to mean that local welfare offices serve in the capacity of collection agencies for hospitals. It is not intended that they should.

It is essential in utilizing these statutory provisions of financial assistance from towns that immediate steps be taken to secure legislation that will abolish the use of the word "pauper" in connection with the assistance granted. It places an unwarranted, ill advised, and unnecessary stigma on the individual who requires assistance and defeats the purpose of current thinking regarding financial aid to our indigent population.

4. Prepaid insurance plans still represent the optimal method of dealing with the costs of medical and hospital care. It, therefore, should be a primary object of all interested agencies to urge the more complete coverage of our population by this type of protection.

SUMMARY

In conclusion, I should like to outline the pertinent points of this paper.

1. The hospital financial problem is the concern of every individual in the State of Connecticut as well as State agencies and other contractural users.

2. The financial situation, while critical, is by no means hopeless.

3. The solution of the problem requires four considerations.

a. The maximum efficient operation of the hospitals with the accurate determination of the costs of specific services, which would provide the basis for charges which are made to the users of those services.

b. The abandonment of the current system of allowances and the collection in full of the costs of services which are rendered to the patients.

c. The aggressive collection of outstanding accounts where the individual has financial resources and the application to local welfare agencies for resistance when the patient lacks sufficient funds.

d. Energetic steps to increase the number of persons in the middle and low income groups who are covered by prepaid hospital insurance plans.

75 Years Ago

From the *Proceedings of the Connecticut State Medical Society*

March 1924

Report of the Committee on Medical Defense

Dr. Frank H. Wheeler, New Haven, Chairman.

Mr. President and Gentlemen of the House of Delegates:

A short time subsequent to our last meeting Dr. William H. Miller, who had been Chairman of this Committee since its formation, died. Dr. William A. LaField, a former member of the committee, was appointed in his place. In the reorgnization of the committee, Dr. Frank H. Wheeler was made Chairman.

In presenting this report of our work during the last year we desire to embody certain suggestions which are of vital importance to all members of the Society and which are the result of the experience we have had thus far.

First suggestion: We desire to especially impress on every member of the Society the necessity of exercising the utmost care in ascertaining all the facts and all the circumstances surrounding any case treated by another physician before expressing an opinion which might in any way be construed as containing a criticism on the treatment instituted by such physician; always remembering that any expression so made is exaggerated and misconstrued in its repetition by others. If the members will take the pains to inquire into the facts as they existed at the time the treatment was instituted and base their expressed opinion on that rather than on the knowledge of subsequent events we would be relieved of many unjust and improper claims.

Second suggestion: Many of our members do not keep adequate and proper records of their cases, particularly those where the patient does not comply with instructions or fails to return for proper and necessary treatment. We urge all members to be especially careful to record all the facts in these cases as such records constitute a very strong item of defense should a suit for damages be brought later on.

Third suggestion: In all cases where the patient or the family refuses, for any reason, to conform to the recommendation or follow the advice of the physician in such matters as going to a hospital for an operation, having an x-ray picture taken or a consultant called, we strongly urge the advisability of obtaining the signature of the patient or a member of the patient's family to a statement of such fact. Neglect to do this will greatly embarrass the physician should a suit be brought based on the allegation that the physician failed to give such advice or direction.

The carrying out of these suggestions is of the utmost importance if the services of your Committee are to be of the greatest possible value to the members of this Society.

As to claims: It is not the purpose, nor do we believe that it should be considered the function, of the committee to conduct its work in such a manner as will prevent the collection of proper damages in any case where one of our members can be justly accused of negligent or improper treatment. But we appeal to the members to promptly refer all such cases to the Defense Committee in order that a true and proper understanding of the facts can be obtained, thereby preventing the exaggeration of minor injuries and the possible collection of entirely unwarranted damages.

We desire to call your attention to another point brought out in our experience, namely: often the physician when attacked feels that a settlement of the case for a nominal amount would be to his personal advantage. We believe that a careful consideration of the real result of such a method in handling these cases will cause each one to

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Reprinted from the *Proceedings of the Connecticut State Medical*, March 1924.

conclude that it is well worth while to resist by every possible means, even at considerable annoyance and loss of time, any attempt to hold them up for even a nominal sum, unless the claim is a just one. Everybody should remember that if a settlement is made, it in itself is an acknowledgement that he has made a mistake which has caused damage to his patient. Also it must be borne in mind that such payment is always a matter of gossip and sooner or later is bound to be distributed by those who get the money, the lawyers who participate in the division of the spoils, and friends and acquaintances. Gossip of this kind is never minimized but always exaggerated as to facts and amounts, all of which is sure sooner or later to injure the reputation of the physician involved. Even in cases where actual damage has been caused by a mistake of the doctor it is still to his interest to secure an opportunity to tell and have placed on record his side of the story whenever an unjust demand is made.

There are at present a number of suits and claims outstanding against members of the Society which are being looked after by the Insurance Company and the Committee. We consider it advisable not to mention these specifically so we may not cause embarrasssment to the physician involved nor injury to the case itself.

Thirteen cases have been terminated. In eight of these, suit was threatened but the parties became discouraged and they are now outlawed. In two, after a careful investigation by the Committee, it was advised that a settlement be made. One was settled for a small amount and in the other $750.00 damages were paid. Suits were started in two cases but they were discouraged and they are outlawed. In the last case suit was filed and threats made that all property of the accused would be attached but no execution has been issued and apparently the suit is not being prosecuted.

Your Committee would report that in every instance it has been able to work in complete harmony with the Aetna Life Insurance Company. A majority of our members carry their insurance with this company. In no instance does it appear that the company has failed to fulfill all its obligations nor have we found any tendency on the part of the Company to fail to consider the best interests of the profession as well as the individual doctor against whom the claim or suit has been brought.

Frank H. Wheeler,
Ernest A. Wells,
William A. LaField,
Committee on Medical Defense

Voted, to accept the report and place it on file.

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FROM THE EDITOR'S DESK

On Megatrends

Reading Dr. Richard L Reece's Special Report in this issue of *Connecticut Medicine* carried my thought processes into the fast lane on the highway of change that is medical practice today. Megatrends indeed! Amidst megatrends-megademoralization, megadisenchancement, and yes, megastress for doctors. But Dr. Reece, a longtime writer of distinction, and a longtime reader of the health-care tea leaves, is no doomsayer, or at least no more a doomsayer than was Paul Revere. His is a voice that heralds in the fog of confusion, discouragement, and rancor out there, alerting physicians about what is happening, where the forces of change are coming from, which signals to listen to, and which to ignore. Out of his prodigious daily survey of the print media he has derived a system of "content analysis" similar to that which supported author John Naisbitt's 1982 book, *Megatrends: Ten New Directions Transforming Our Lives.*

Reece's system leads him to conclude that Naisbitt's forecasts about health care were pretty close to the mark when set alongside actual phenomena extant in this millennial year. The explosion of alternative medicine and its market-driven integration into the mainstream, the shift, again market-driven, to the outpatient mode represented by ambulatory centers, short-stay units, birthing centers, and satellites, and the rise of information technology, available to health-care institutions, payors, physicians, and especially to the health-conscious public are given as vivid examples. The physician-dependent posture of patients, once so prevalent, has been replaced by active participation and informed decision making by patients and families. The voluminous bookstore shelves bearing guidance, (and sometimes misguidance), seemingly infinite Internet sources of self-help, and the aggressive coverage of health issues by the media have informed a new public that we physicians must understand, and, yes, serve.

Rather than lament this state of affairs, I believe we must promote optimism in our medical circles and advantage our professional roles in concert with our patients. They have become smarter about health, about our work, and about us. We must get smarter, too. The same technologies that have contributed to a better informed public are available to us. Despite the electronic miracles of the past decade, our record-keeping systems and data retrieval systems are still disjointed, dissimilar one to another, and generally disconnected in our health-care institutions and in our practice offices. While we are collegial and cooperative about the care of patients, covering for each other within and across groups and practices, our recording and documentation systems often do not reflect that same cooperation and continuity. Every phone conversation, every pertinent conveyance of information or counsel to a patient or family member in my practice or pertaining to the practice of the physician I'm covering may someday be called for in a documented way. Beyond the litigious implications, this information may be essential to my covered colleague's decision making on Monday morning. Perhaps we should seek guidance from our colleagues in the legal profession whose phone conversations are an integral part of their chargeable service to clients and are therefore retrievable in substance.

On the subjects of wellness and prevention of illness, which Naisbitt predicted would be important to the public at the millennium, and Reece confirms contemporaneously, more is expected of us in the profession. Every medical discipline has its role in promoting and advancing the cause of preventing the disabling ravages of disease, so costly in suffering and in dollars. The dreaded infectious illnesses are an obvious focus, but even in the surgeon's domain the removal of an inflamed appendix before perforation (20% of all acute appendectomies with a 10-fold increase in mortality, morbidity, and dollar cost), and the discovery of abdominal aortic aneurysms before rupture are appropriate areas for research and action. Wider promotion and access to screening for colon and breast cancer are also essential efforts for us in the profession to espouse.

Finally, we should be heartened, not discouraged by the identification of our State of Connecticut as one of five bellwether states in innovating social change in health care. We have a lot going for us: political stability, affluence, a pace setting public education system, a responsible business community, a public-spirited populace, and, not least, a proud and effective collection of doctors and health-devoted institutions. Lo and behold, we are not the victims of Megatrends at the millennium, we are active and thoughtful participants, yes, even crafters of them. Take heart.

H. David Crombie, M.D.
Editor

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Neil J. Grey, M.D.
Medical Director

Michele R. Norbeck
Director

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THE PRESIDENT'S PAGE ... PERSONAL INSIGHTS

U.S. Government to Seniors: Your Docs Are Cheating You

Do you remember back in the 1980s when the CSMS was fighting attempts by the state legislature to make acceptance of Medicare mandatory? One of the more interesting spectacles was a group of beret wearing members of United Seniors in Action on the Capitol steps singing a song about how greedy doctors were to the tune of the "Battle Hymn of the Republic." Now think forward to the present when the federal government has done what the state government was never able to do, ie, force virtually all physicians to participate in Medicare. A funny thing has happened along the way. With all of the excesses of managed care, particularly managed Medicare, we physicians are not quite the grinches we used to be. Why? Because we have done an excellent job of insulating our patients from many of those excesses. We go to bat for our patients with managed care instead of letting them fight their own battles. What we receive in return, of course, is a fraction of our fees as they existed in the late 1980s but that is the subject of another day.

Just as physicians and seniors have established a wary truce, the federal government and the AARP are embarking on a program to encourage Medicare beneficiaries to examine their medical bills for waste, fraud and abuse.

Two things need to be said right away. First, it is the official policy of the AMA and the CSMS that we have zero tolerance for genuine (knowing and willful) fraud in the Medicare program or any other. Where there is clear evidence of fraudulent conduct, both organizations stand ready to work with the appropriate federal agencies to address documented problems. Secondly, the government really has no idea whether or not fraud and abuse are significant problems. A recent report issued by the Department of Health and Human Services Office of the Inspector General noted that so-called improper payments "could range from inadvertent mistakes to outright fraud and abuse," adding that "the portion of the error rate attributable to fraud could not be quantified."

The federal government's unfocused, illogical shotgun approach toward this issue undermines the trust of the physician-patient relationship that we work so hard to build. It ineffectively and inefficiently focuses on the rare instances of genuine fraud. It will certainly have unintended consequences. It is already a nightmare for physicians' offices to comply with Medicare's more than 100,000 pages of ever-changing complicated regulations and supporting documents. George Orwell's "1984" is here for physicians. The government has made the rules virtually impossible to understand fully and they are now going to prosecute us for not being able to understand them fully. If patients are going to question their bills by screaming "fraud" to the federal government, more and more physicians will choose to forego dealing with Medicare altogether. Senior citizens will suffer a loss in their ability to choose a physician.

The A.M.A. and the CSMS will do what they can to persuade the government to look for fraud in a methodologically valid way. In the meantime, physicians' offices should expect to start receiving inquiries from H.C.F.A. about their bills. If you do, I urge you to treat them seriously because the consequences can be very serious, indeed. I also urge you to let the CSMS know about the allegations and the eventual outcome. As a Society, we must stand up for each other and the principle on which our legal system was founded; every person is innocent until proven guilty.

Craig W. Czarsty, M.D.
President

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REFLECTIONS ON MEDICINE

William Osler: Humanist

ROBERT U. MASSEY, M.D.

THE American Osler Society will meet, appropriately, in Montreal this year to celebrate the sesquicentennial year of the great physician's birth, 12 July 1849. It is old style, I know, and politically incorrect, misguided, even gauche to attribute greatness to anyone in these enlightened times, most especially to a white, European male. Perhaps Caucasian would be a better word than white to use for William Osler: the painter of the famous "Four Doctors," John Singer Sargent, spoke of him as "This little brown man. I don't know what to do with him. I have never painted a man with an olive green complexion." Osler himself, wrote of Sargent's famous painting, "He has caught my eyes and the ochrous hue of my dour face...."[1]

One of Osler's admirerers, Edith Giddings Reid, titled her 1931 biography *The Great Physician*; the work is an encomium, a panegyric, almost too much even for those of us for whom WO remains a hero in these days when all are equal and when, for most, every hero has become "a bore at last." When Dr. Henry Sigerist, hardly a political conservative (although he would surely have balked at political correctness), published *The Great Doctors* in that same year (in German, *Die Große Ärzte*; the English translation came out in 1933), he ended it with William Osler, the final biographical sketch in a series of 48 that began with the physician-architect Imhotep (2900 B.C.). Sir William was the only North American among Sigerist's greats, undoubtedly reflecting his continental point of view before he moved from Leipzig to Baltimore.

> What gave the man so widespread an influence was that, in contradistinction to so many of the noted European clinicians of that day, he was no mere one-sided man of science. Although he did more than anyone else to introduce precise laboratory methods into the field of American clinical medicine, he was a born humanist. He loved books, collected them, and read them by the score.

Indeed Osler collected books, bound volumes, including incunabula, and manuscripts to a total of more than 7,700 in all, now catalogued and annotated in the *Bibliotheca Osleriana* and resting securely on the shelves of the The Osler Library at McGill University. In his life of 70 years this man taught students "at the bedside" at four universities, McGill Unviersity, University of Pennsylvania, Johns Hopkins, and Oxford University; wrote textbooks, essays, histories, biographies (his bibliography includes 1,473 separate titles), lectured all over North America and Europe, practiced medicine, counting "all sorts and conditions of men" among his patients, and yet was recognized as a humanist scholarly enough to be elected president of the Classical Association of Oxford.

In his presidential address to that Association in May 1919, seven months before his death, Osler spoke of the natural synergy that ought to exist between science and the humanities. One paragraph struck me as apt for our time, 80 years later:

> The extraordinary development of modern science may be her undoing. Specialism, now a necessity, has fragmented the specialties themselves in a way that makes the outlook hazardous. The workers lose all sense of proportion in a maze of minutiae. Everywhere men are in small coteries intensely absorbed in studies of great interest, but of very limited scope.... Applying themselves early to research, men get into the backwaters far from the mainstream. They quickly lose the sense of proportion, become hypercritical, and the smaller the field, the greater the tendency to megalocephaly.

Osler's final words in that address bear repeating:

> There is a sentence in the writings of the Father of Medicine upon which all commentators have lingered, 'For where there is love of man, there is also love of the art.'—the love of humanity associated with the love of his craft!—philanthropia and philotechnica—the joy of working joined in each one to a true love of his brother. Memorable sentence indeed! in which for the first time was coined the word *philanthropy,* and conveying the subtle suggestion that perhaps in this combination the longings of humanity may find their solution, and Wisdom—philosophia—at last be justified of her children.

When our class graduated from medical school 53 years ago, Eli Lilly & Co. gave each of us a copy of Osler's *Æquanimitas*. I believe many of us read it through, in fits and starts, during our internship year. At an earlier urging of our professor of medicine, many of us had already acquired and even read Harvey Cushing's Pulitzer prize winning *Life of Sir William Osler.* Some even

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ROBERT U. MASSEY, M.D., Professor Emeritus, Division of Humanistic Studies, Department of Community Medicine and Health Care, University of Connecticut School of Medicine, Farmington.

acquired and promised ourselves to read at least some of his "Bed-side Library for Medical Students":

I. Old and New Testament
II. Shakespeare
III. Montaigne
IV. Plutarch's *Lives*
V. Marcus Aurelius
VI. Epictetus
VII. *Religio Medici*
VIII. *Don Quixote*
IX. Emerson
X. Oliver Wendell Holmes—Breakfast Table Series

Some medical students are still drawn by Osler's magic, but fewer, I believe, each year. His language is Old Western and to most must now seem archaic. Those of our colleagues born after World War II, have rarely heard it spoken, have almost never read it. The allusions, subtle and often hidden, mostly escape them; they know little of Greek and Roman authors; and not much of Shakespeare, the Bible, and the eighteenth- and nineteenth-century poets and novelists, that our teachers took so seriously. And medical history before DNA, AIDS, and CABGs, is a blur, largely irrelevant, a strange place. Social historians, vaguely Marxist, and humanists who expend their talents in deconstructing texts have rendered liberal education in these latter decades, except for the sciences, mostly unnoteworthy, unappealing, a waste of time. Is the remedy in Osler's bed-side library? I doubt it; with three or four exceptions, his list today would swamp the hardiest. But his advice that precedes it is worth considering:

> Well filled though the day may be with appointed tasks,... rest not satisfied with this professional training, but try to get the education, if not of a scholar, at least of a gentleman. Before going to sleep, read for half an hour....

Efforts to recover the old humanities have been made by restorationists in our century. The University of Chicago and its Great Books curriculum, St. Johns in Baltimore and Santa Fe with its mandatory two years of Greek and French and the classics in science and philosophy have been brave efforts to revitalize the roots of Western civilization, but they started no revolutionary movements in higher education.

Interest in great literature (another politically incorrect sin: aren't all texts of equal value once they are deconstructed?) begins in adolescence. What we read in American Lit and English Lit in high school 60 years ago appealed to most of us, helped us tame the surging hormones, suggested modesty, romance, and civility, and, I believe, made a difference. The titles I recall, beyond a fairly deep immersion in English and American poetry, included among others Shakespeare's *Julius Caesar, The Taming of the Shrew, Hamlet, Macbeth,* and *Romeo and Juliet* ; Dickens's *David Copperfield, Oliver Twist, and Tale of Two Cities*; Stevenson's *Treasure Island,* and Scott's *Ivanhoe*. Current literature was mostly neglected—almost nothing later than 1914, but there were movies that whetted the appetite for more. And no television! And of course no PCs!

Osler's formal classical education stopped after he entered the University of Toronto: a year of theology, and then medical school, and yet he is remembered as a humanist, one in the style of his own heroes, Dr. Thomas Linacre, Sir Thomas Browne, Sir Thomas More.

Sometime in the 1960s medical schools began to reintroduce medical history into their curricula, and often integrated it with literature and medical ethics. Humanistic Studies in Medicine it was called at the University of Connecticut. Several of us who attended a meeting of the Congress on Medical Education in Chicago in the late 1960s or early 1970s took seriously a remark made by Edmund Pellegrino to the effect that "Medicine is the most humane of the sciences and the most scientific of the humanities." We also had begun to suggest that premedical students meet only the minimum requirements for science—they would get plenty of science in medical school— and devote the remainder of their undergraduate education to the humanities.

There is little evidence that the humanities in medical education, including even medical ethics and medical history, will make our students better doctors, more compassionate, empathetic, or clinically skillful—their characters are settled long before the medical school years—but it may make for a deeper understanding of life's mysteries, maybe even better judgment. To the student he wrote:

> There are great lessons to be learned from Job and David, from Isaiah and St. Paul. Taught by Shakespeare you may take your moral and intellectual measure with precision....
>
> Begin at once the cultivation of some interest other than the professional.... When tired of anatomy refresh your minds with Oliver Wendell Holmes; after a worrying subject in physiology, turn to the great idealists, to Shelley or to Keats, for consolation; when chemistry distresses your soul, seek peace in the great pacifier Shakespeare; ten minutes with Montaigne will lighten the burden.

Such advice can't harm, and since our work with patients usually begins with trying to understand a brief autobiography or biography, we become unwittingly literary critics anyway.

This Month's Reading in Review

TIMOTHY B. NORBECK

"A Riverside, California jury recently sent the nation's largest HMO, Aetna, a $120 million message: Human life is priceless and should not be sacrificed for money. The largest verdict ever against a health maintenance organization went to school teacher Teresa Goodrich, whose husband, a district attorney, died of stomach cancer after a 2-1/2 year ordeal trying to get Aetna to approve cancer treatment recommended by his Aetna doctors. When it was clear David Goodrich could wait no longer, his doctors administered care without approval. Goodrich died believing he had left his wife with $750,000 in medical bills. The jury's message was that Aetna cannot ignore its own doctors' recommendations and must act more quickly when a patient's life hangs in the balance. In one instance, it took Aetna four months to approve high-dose chemotherapy; by then, it was too late to be of benefit to Goodrich.

Jamie Court, director of Consumers for Quality Care, commenting on the recent jury verdict against Aetna.
Los Angeles Times (27 January 1999)

"You had a skillful ambulance-chasing lawyer, a politically motivated judge, and a weeping widow. That's no way to get justice and certainly no way to manage a trillion-dollar industry."

Response by Aetna CEO Richard L. Huber, after hearing the jury verdict.
Hartford Courant (22 January 1999)

"The market power that would be created or exacerbated by this merger would limit the choices of patients and employers, reduce competition and further erode the ability of physicians to make medical decisions based on science and the medical needs of their patients, not share prices."

E. Ratcliffe Anderson, Jr., M.D. AMA EVP, on the recent Aetna effort to purchase Prudential's Insurance Company's health plan operation.
NOTE: AMA has asked the U.S. Justice Department's Antitrust Division to challenge the merger.
Physicians Financial News (15 February 1999)

A light on the horizon?

After years of resistance, HMOs have agreed to help pay the costs of care for members who enroll in clinical trials evaluating new drugs and medical procedures.... Under the new agreement, the American Association of Health Plans says it will encourage managed-care plans to "reimburse the routine patient-care costs associated with NIH-sponsored clinical trials provided those costs are not substantially higher than the costs a plan would incur in the course of standard treatment."

New York Times (9 February 1999)

"We don't agree with the government's allegations, but their position was either spend a lot of time and money on an investigation or accept this. The doctors felt they couldn't afford it, so they accepted it."

An antitrust lawyer who unsuccessfully defended 29 Tampa (FL) surgeons against U.S. Department of Justice charges of violating antitrust laws by sharing information and negotiating collectively.
NOTE: This case illustrates so well why the AMA is attempting to secure antitrust reform and a level playing field for physicians.
American Medical News (15 February 1999)

The Virginia Supreme Court has upheld the state's 23-year-old cap on judgements in medical malpractice cases, despite challenges and objections to the cap by trial lawyers.... Such a decision, rendered unanimously, means that doctors found liable for medical negligence cannot be forced to pay more than $1 million in damages.

Physicians Financial News (15 February 1999)

"Nobody has done more to promote the HMO juggernaut in Minnesota than Jan Malcolm. It does not bode well for the Minnesota Health Care System. I would think that an independent governor would want to appoint an independent commissioner."

Citizen's Organized Acting Together spokesperson Kip Sullivan in expressing both disappointment and surprise that Governor Jesse Ventura (I) appointed Jan Malcolm (vice president of the state's largest HMO, Health Partners) commissioner of the state Health Department.
St. Paul Pioneer Press (20 January 1999)

Only in America:

"One of the local funeral directors even called me up to offer a special group rate."

J. Michael O'Connell, Mayor of Saratoga Springs (NY), one of 350 municipal employees to receive a W-2 tax form listing him as dead.
TIME (15 February 1999)

TIMOTHY B. NORBECK, Executive Director, Connecticut State Medical Society.

The Robert U. Massey History of Medicine Society

Upcoming Schedule of Presentations

April 14

John Harley Warner, Ph.D., Professor, History of Medicine and American Studies,
Yale University School of Medicine

Narrative at the Bedside: The Transformation of the Patient Record in Nineteenth-Century America.

The Robert U. Massey History of Medicine Society is an association of individuals interested in presentations and discussions on the history of medicine. The society seeks to foster an understanding of medicine's history and an appreciation for the cultural and social settings in which medical developments have taken place. The society also seeks to encourage health sciences students to acquire an appreciation for their historical heritage.

The society is affiliated with the University of Connecticut Health Center and is open to those who have an interest in the history of medicine. A roster of members is maintained in the Department of Community Medicine and Health Care. Those who wish to be included on the membership roster should notify this department to be included on the mailing list for society lectures. The willingness of members to present lectures or recommend speakers contributes to the society's ability to maintain community interest and to attract new members.

The society meets the 2nd Wednesday of the month at 5 P.M. in Lecture Room A of the University of Connecticut Health Center. *For further information:* Theo Ungewitter, Department of Community Medicine, University of Connecticut School of Medicine, 263 Farmington Avenue, Farmington, CT 06030-1910; (860) 679-2356; *email:* ungewitter@nso.uchc.edu

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Department of Community Medicine and Health Care Seminar Series

Sponsored by

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Office of Continuing Education

The Department of Community Medicine and Health Care

and the

Lowell P. Weicker, Jr. General Clinical Research Center

"Achieving a World Wide HIV Vaccine:
The Need for an Accelerated National Campaign"

Presented by

Richard Marlink, M.D., Executive Director, Harvard AIDS Institute

Thursday, 8 April 1999
3:00–4:30 P.M.
Friends Lecture Room (LM-034)

Target Audience: Physicians and Other Health Professionals

Objectives: Participants will be able to identify the lessons learned from past vaccine efforts against infectious disease; learn how to apply those lessons to the present state of HIV vaccine development and testing, and recognize what might be done nationally to achieve an HIV vaccine that is effective world wide and available as soon as possible.

Accreditation: The University of Connecticut School of Medicine is accredited by the Accreditation Council for Continuing Medical Education to sponsor continuing medical education for physicians

The University of Connecticut School of Medicine designates this educational activity for a maximum of 1.5 hours per session in category 1 credit towards the AMA Physician's Recognition Award. Each physician should claim only those hours of credit that he/she actually spent in the educational activity.

Conflict of Interest Policy: All faculty participating in Continuing Medical Education activities sponsored by the University of Connecticut School of Medicine are required to disclose to the program audience any real or apparent conflict of interest related to the content of their presentations.

We hope you will be able to take time from your busy schedule to join us. Please call Theo Ungewitter at (860) 679-2356 for further information or directions to the Health Center, 263 Farmington Ave., Farmington, CT

Letters to the Editor

Letters to the Editor are considered for publication (subject to editing and abridgement), provided that they are submitted in duplicate, signed by all authors, typewritten in double spacing, and do not exceed 1-1/2 pages of text (excluding references). They should not duplicate similar material being submitted or published elsewhere. Letters referring to a recent Journal article should be received within six weeks of the article's publication.

In Response to Drs. Katz, Slater, and Spencer

Letter to the Editor: The letters of Drs. Katz, Slater, and Spencer raise the important question as to how the practice can be organized so as to benefit the patient, compensate the physician, and not bankrupt the government. Dr. Katz's answer to Dr. Slater unfortunately seems specious. What has the high unemployment rate in Germany, France, and Italy got to do with the fact that they have a national health insurance program? We need not look at faults in other countries. Rather we should be examining what is happening here. Let me give you an example. I see a couple in couples psychotherapy, and my fee for an hour and fifteen minutes is $250. However, since this complicates matters, I have billed separately for wife and husband at $125 each. The HMO responded by eliminating the wife's bill, deciding that the allowed amount should be, not my $125, but rather $37.50, of which they paid, $30. So instead of $250 for the hour and a quarter, I have been given $30.00. Furthermore, in treating a schizophrenic patient I am allowed seven or eight sessions. Does anyone know of successful treatment of such a patient in eight sessions?

Obviously we are experiencing a crisis in our treatment endeavors. I doubt if a single payer system can be much worse. I don't believe that the waste that Dr. Katz deplores in government management is any less for the private insurance companies.

Leo H. Berman, M.D.
Westport

Write A Letter to Your Legislator, Today

Most physicians would readily admit that the need for professional unity is greater now than ever before. And though the CSMS does a very good job of representing physicians' and patients' interests, imagine how much greater its effectiveness would be if more physicians became involved in the activities of the Society or their local county medical associations.

For those who live in the environs of the Capitol, perhaps it may be easier to attend public hearings and to have direct contact with legislators than those of us who live further away from the corridors of power. For those who find it difficult to free up office time for grass-roots politicizing, it is important to remember that writing a letter or making a telephone call to a legislator can be very helpful.

It is my impression that some colleagues feel that they have to have profound political knowledge of the goings-on at the Capitol in order to express an intelligent opinion or to make a difference. But, in fact all one has to do is to write a letter "from the heart," expressing exactly what is on your mind. My personal experience is that legislators respond to this type of letter much more than they do to a form letter.

I have discussed physician participation in the legislative process with state senators and representatives over the past three years and the one constant lament that they express is that they "don't hear enough from you doctors." Of course it is hard for them to understand the pressure of being on call and being wedded to our beepers. It is equally difficult for them to understand how when we do make time to visit the Capitol or go to a public hearing, you suddenly get swamped with urgent phone calls, minutes turn into a half-hour, then into an hour, and before you know it, it's too late. You feel guilty and rationalize what happened by saying "oh well, what was I going to really get done up there today anyway?"

This is why writing letters or making phone calls is so important. They can be done from home, when the pressures of the day have settled down and one's composure and energy have returned.

In particular the State Legislative Grassroots Manual mailed out to members is very useful. It has helpful tips on writing and calling legislators. In very clear language it describes how a bill becomes a law. For many members this is something that they could use a little brushing up on. Knowing something about the legislative process demystifies it and gives one confidence in contacting legislators. In addition,the manual also comments about writing letters to the editors and op-ed pieces for our local newspapers. Imagine the effect on the public consciousness and that of our legislators if just one letter written by a doctor every week were to appear in our local newspapers discussing the impact of managed care.

For those who can, faxing, and e-mailing letters makes the process extremely easy. Receiving a reply by e-mail from a legislator can be very satisfying. It makes you feel that in a small way you have made a difference.

Finally, remember that you don't have to write with the power or polemics of the likes of Winston Churchill. Just write sincerely about what is bothering you about the way our health-care system is shaping up.

Edward J. Volpintesta, M.D.
Bethel

CPRO Changes Its Name

At Qualidigm, formerly known as CPRO, we think that there's a lot in a name, and often a new name really does signify a material transformation.

So why did we change our name, and how did we come up with "Qualidigm"?

First, we changed our name to more accurately convey our expanded focus on the area of quality improvement. After several years of careful consideration, we finally settled on a combination of two widely used words in our industry—"quality" and "paradigm"—as the genesis of our new name. Qualidigm, as we see it, reflects the various ways we create and use "quality paradigms" with our collaborators and customers.

We think the name is progressive and visionary.

With all the changes, some things are still the same. For one, quality is what drives everything we do, the core principle of all of our activities. This is exemplified by Qualidigm's primary contract with the Health Care Financing Administration (HCFA), under which we provide oversight of Connecticut's Medicare program. Contract requirements include conducting various collaborative quality improvement projects throughout not only the state, but also the nation.

Qualidigm has a similar arrangement with the State of Connecticut to oversee its Medicaid managed care program, as well as several other private contracts to perform a variety of data analysis and quality improvement activities.

An Exciting Array of Projects

Qualidigm is currently involved in more than 25 collaborative quality improvement projects in a variety of settings *(*see matrix [*Conn Med* 1999; 63:2:117]*)*. These projects range from national hospital-based projects to local efforts with physician practices across Connecticut.

Over the past four years, Qualidigm has worked with its collaborators on successful projects to: improve mammography utilization rates among senior women; increase the number of Medicare patients who survive heart attacks; and increase beneficiaries' statewide pneumococcal immunization rate. Most notably, Qualidigm's work on the national Cooperative Cardiovascular Project (CCP) was recently featured in an article in the *Journal of the American Medical Association.*

Getting the Word Out

Qualidigm's Clinical Coordinators, Analysts and Project Coordinators publish frequently in peer reviewed journals, helping to educate and inform health care professionals about the latest quality improvement initiatives.

Recent Publications

Acute Myocardial Infarction.—Krumholz HM, Radford MJ, Wang Y, et al: National use and effectiveness of beta blockers for the treatment of elderly patients with myocardial infarction: National Cooperative Cardiovascular Project. *JAMA* 1998; 260:623–9.

Marciniak TA, Ellerbeck EF, Radford MJ, et al: Improving the quality of care for Medicare patients with acute myocardial infarction: Results from the Cooperative Cardiovascular Project. *JAMA* 1998; 279:1351–7.

Stroke Prevention.—Brass LM, Krumholz HM, Scinto JD, et al: Warfarin use following ischemic stroke among Medicare patients with atrial fibrillation. *Arch Intern Med* 1998; 158:2093–100.

Breast Cancer.—Preston JA, Grady JN, Schulz AF, et al: The impact of a physician intervention program on older women's mammography use. *Eval Health Prof* 1998; 21:502-513.

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Marcia K. Petrillo
Chief Executive Officer

From the Executive Director's Office

CALL

ANNUAL MEETING OF THE HOUSE OF DELEGATES

The 1999 annual Meeting of the House of Delegates will be held at the Ramada Inn, 275 Research Parkway, Meriden. The meeting will commence at 12:30 P.M. on Wednesday, 12 May and will continue until all business has been concluded. **J. Edward Hill, M.D., Member of the AMA Board of Trustees, has been invited to speak at the meeting.**

Craig W. Czarsty, M.D., President
Howard J. Wetstone, M.D., Speaker of the House
Brian Van Linda, M.D., Secretary

11:30	Registration of Delegates Luncheon
12:30	Call to Order
	Adjournment at Conclusion of Business Reception for the Incoming President

* *

INTRODUCTION OF RESOLUTIONS

Article V, Section 12, Par. 3 of the Bylaws of the Society provides that:

Resolutions may be introduced by any Active, Life Member, Student Member or Postgraduate Physician Member of The Society, in compliance with the following provisions.

a. *All resolutions, reports and similar items of business submitted in writing and received at the office of the Executive Director not later than thirty days before the date scheduled for that meeting shall be considered as regular business of the House of Delegates.*

b. *Component county associations or the Student Member or Postgraduate Physician Member Associations whose meetings are held later than thirty-five days prior to the date of the House of Delegates shall be allowed five days after the close of such meeting in which to submit resolutions, reports and similar items of business to the Executive Director's office and still have such material considered as regular business. In no event, however, may such resolutions, etc., be considered regular business if they are received later than fifteen days prior to the date of the meeting.*

c. *Reports, recommendations, resolutions or other new business may be presented to the House of Delegates by the Council of the Society at any time and shall be considered as regular business.*

d. *Any business which does not qualify as regular business in accordance with the foregoing provisions may be accepted for consideration by a majority vote of the delegates present and shall be referred at once by the Speaker to a reference committee. When business is introduced under the provisions of this paragraph the vote shall be taken without debate, except that the introducer shall be allowed not more than two minutes to explain why it should be considered as regular business.*

* *

MEDICARE NEWS UPDATE

HCFA Ruling on Delivery of DMEPOS Items Prior to Discharge

The Health Care Financing Administration recently clarified the issue of providing DMEPOS items to beneficiaries prior to discharge to home.

"In some cases it may be appropriate for DMEPOS suppliers to deliver medically necessary equipment to a facility that does not qualify as the patient's home up to two days prior to discharge (to a place that does qualify as a home) for the benefit of the patient for purposes of fitting or training of the patient on its use. However, the equipment must be for subsequent use in the beneficiary's home and no billing may be made for this equipment for days used prior to the date of the patient's discharge from the facility to the home. In such cases, the date of discharge is deemed to be the date of delivery. Suppliers are responsible for any necessary delivery of DMEPOS times and cannot bill the beneficiary or the Medicare program for delivery from the facility to the patient's home. Should a DMEPOS supplier enter into an agreement with such facility to substitute this equipment for DMEPOS required by statute to be provided by the facility, such practice would be considered fraudulent."

Region A DMERC emphasizes the following points with regard to this issue:

- In ALL cases of delivery prior to discharge, the early provision of DMEPOS items is for the purpose of fitting or training of the patient on the item's use, for subsequent use in the patient's home. Items delivered early solely for the convenience of the supplier or beneficiary are not allowed.
- There must be no billing for surgical dressings, urological supplies, ostomy supplies or drugs that are used or supplied in the hospital, including items worn home by the patient.
- If the DMEPOS item is delivered to the hospital for use by the beneficiary after discharge to home or residential care facility, the supplier should bill the date of service as the date of discharge to home and should use POS = 12 or 33, as appropriate.
- For prosthetics, orthotics and therapeutic shoes for diabetics delivered to a beneficiary being transferred (discharged) to a skilled nursing facility or nursing facility after discharge from the hospital, the supplier should bill the date of service as the date of transfer (discharge) to the SNF/NF and should use POS = 31 or 32 as appropriate.
- If a DMEPOS item is delivered to a beneficiary's home in anticipation of discharge from a hospital or SNF/NF, the supplier should bill the date of service as the date of discharge from the facility.

In all cases of early delivery of DMEPOS items, the delivery date may only be made within two (2) days of the anticipated discharge date AND no billing may be made for those days of use prior to the date of discharge.

New Code for Amphotericin B

A new code has been established for any formulation of Amphotericin B Lipid Complex.

The new code: J0286 Injection, Amphotericin B, any lipid formulation, 500 mg.

This code is effective for claims with dates of service on or after 1 January 1999.

Currently there are three preparations of Amphotericin B that are categorized under this code. They are Abelcet, Amphotec and Ambisone.

Liposomal Amphotricin B is covered for patients who have suffered significant toxicity that would preclude the use of standard Amphotericin B and are unable to complete their course of therapy without the liposomal form. Also the liposomal form is covered for patients who have impaired hepatic function.

The documentation requirements that must be submitted with the claim include a narrative statement from the physician describing the rationale for the use of the liposomal Amphotericin preparation.

Peak Flow Meters

HCPCS Code A4614, Peak flow meter, hand held, has been established effective for dates of service on or after January 1, 1999.

Peak flow meters are covered for the self-monitoring of patients with pure asthma, ICD-9 493.00-493.11) when they are used as part of a comprehensive asthma management program. Insufficient evidence exists to demonstrate that there is a benefit to the use of peak flow meters in patients with other respiratory diseases, e.g. COPD, bronchitis, emphysema, etc. All of the patient's pulmonary ICD-9 diagnosis must be included on claims submitted for A4614. Claims for A4614 with diagnoses other than asthma will be denied as not medically necessary.

Expansion of Coverage—Oral-Anti-Cancer Drugs

Medicare has expanded coverage of certain oral anti-cancer drugs to include FDA approved oral-anti-cancer prodrugs effective for claims with dates of service on or after 1 January 1999. Prodrugs have the *same active ingredients in the body* as injectable anti-cancer drugs. For coverage under the oral anti-cancer drug benefit, an oral drug may have a different chemical composition from an injectable drug at the outset, but after metabolism it must have the same active chemical composition as the injectable drug.

At present, the oral anti-cancer drug benefit includes coverage for cyclophosphamide, etopside, methotrexate and melphalan. This benefit is being expanded to include a 5-FU prodrug, capecitabine, trade name: Xeloda manufactured by Roche.

Claims for oral anti-cancer drugs and prodrugs are billed to the DMERC on Form HCFA-1500 or its electronic equivalent using the appropriate National Drug Code (NDC). In addition to the NDC numbers listed in the Appendices section of the Region A Supplier Manual for Oral Anti-Cancer Drugs, the following NDC numbers have also been approved for coverage:

0004-1100-22	Capecitabine, 150mg, oral, 1 tab per unit
0004-1100-51	Capecitabine, 150mg, oral, 1 tab per unit
0004-1100-13	Capecitabine, 150mg, oral, 1 tab per unit
0004-1101-51	Capecitabine, 500mg, oral, 1 tab per unit
0004-1101-16	Capecitabine, 500mg, oral, 1 tab per unit
0004-1101-13	Capecitabine, 500mg, oral, 1 tab per unit

Claims for specific oral anti-cancer prodrugs must include a cancer diagnosis on the claim form. The physician/supplier must have a valid license to dispense prescription drugs.

Oral Appliances for OSA

Oral appliances used to treat obstructive sleep apnea (OSA) will be considered for coverage if they meet the general coverage requirements for Durable Medical Equipment (DME) and are determined to be reasonable and necessary in the treatment of the specific patient. Claims for these items must be submitted to the DMERC using code E1399—Durable Medical Equipment, miscellaneous. Claims must be accompanied by the following information:

1. The name and manufacturer of the specific device which was provided.
2. A statement of the estimated appliance useful lifetime before replacement is necessary if the patient uses it daily.
3. Documentation from the treating physician stating the diagnosis, what other therapy had been tried or considered, and why the oral appliance is being ordered.
4. A copy of the polysomnogram report which documents the patient's sleep disorder and a copy of a sleep study report which documents improvements with the use of the oral appliance.

Any other information that addresses the medical necessity of the device for the specific patient may also be included with the claim. Claims without the required documentation will be denied as not medically necessary.

Oral appliances used to treat snoring without a diagnosis of OSA are coded E1399 and will be denied as not medically necessary.

Oral appliances for other non-dental conditions would be coded E1399. Claims must be accompanied by information similar to 1, 2, and 3 above as well as literature references documenting the effectiveness of this type device for the diagnosis for which it was prescribed. These claims will be evaluated on a case by case basis.

Oral occlusal appliances used to treat temporomandibular joint (TMJ) disorders are coded D7880 - Occlusal orthotic appliance. These devices are considered dental related items and therefore non-covered by Medicare. If a supplier wants to submit a claim for a TMJ device, that claim would have to be sent to the local carrier, not the DMERC, because local carriers have jurisdiction for processing D codes.

DMERC Medicare News, December 1998

American Medical Accreditation Program

- The Connecticut State Medical Society and its affiliate, MD Advantage, together with the American Medical Association, have begun implementation of the American Medical Accreditation Program—**AMAP^{sm}** in Connecticut.

- In late December, Connecticut physicians were sent an introduc-tory mailing which included the opportunity to request their personalized **AMAP^{sm}** Application Kit. **Over 800 Connecticut physicians have already requested their applications. Have you requested yours yet?**

Do *you* need an AMAP application?

- As an alternative to sending individual physicians their applications, **AMAP can send applications for an entire group to the office/practice manager** for distribution. An AMAP customer service representative is assigned to each group. **Call The AMAP Resource Center toll-free at 1-888-881-2627.** Monday thru Friday 8:00 am–6:00 p.m. (Central time).

- They will answer your questions **and** send you your personalized AMAP application packet.

- For information and to review the Standards and Criteria currently used to evaluate physicians in the first three components of AMAP (credentials, personal qualifications, and environment of care), you can visit the AMA's AMAP website via a direct link from the CSMS website at www.csms.org [or log on to www.ama-assn.org/med-sci/amapsite/index.htm].

- **Why wait? ...** Join your colleagues who have already requested their personalized AMAP application kit.

- **AMAP *is* the One-Time, One-Source, One-Standard Solution ...** to help you to significantly cut your paperwork and other credentialing hassles.

IN MEMORIAM

CAVALIERI, RINALDO J., Jefferson Medical College of Thomas Jefferson University, 1942. Dr. Cavalieri was the former health director of Newington and chief of medicine at the Veterans Home and Hospital in Rocky Hill until his retirement in 1989. He practiced family medicine in Newington and was a senior physician in occupational health at United Aircraft in East Hartford. He was a member of the Hartford County Medical Association, the Connecticut State Medical Society where he served on the Committee on Continuing Medical Education for over 10 years and on the Committee on Occupational Health, and the American Medical Association. Dr. Cavalieri died 11 February 1999 at the age of 84.

DeLUCA, JOSEPH V., Georgetown University School of Medicine, 1947. Dr. DeLuca, a radiologist, retired from practice in 1989. He was a member of the medical staff of St. Vincent's Medical Center and was the attending radiologist for the Dinan Memorial Center in Bridgeport. A former officer of the Bridgeport Medical Association, Dr. DeLuca was a member of the Fairfield County Medical Association and the Connecticut State Medical Society. Dr. DeLuca died 17 January 1999 at the age of 75.

DONNELLY, JOHN, Faculty of Medicine, University of Liverpool, 1938. Dr. Donnelly, a psychiatrist, joined the staff of The Institute of Living in 1949, was appointed medical director in 1956, and was named Psychiatrist-in-Chief and Chief Executive Officer in 1965. He retired from that position in 1979 but continued as a senior consultant to The Institute of Living until 1984. He was a Professor of Psychiatry at the University of Connecticut School of Medicine and an Associate Clinical Professor of Psychiatry at Yale University School of Medicine. Active and honored by numerous local, state, and national psychiatric associations, Dr. Donnelly was a member of the Hartford County Medical Association, the Connecticut State Medical Society where he served on numerous committees relating to mental health, aging and drug abuse, and the American Medical Association. Dr. Donnelly died 18 February 1999 at the age of 84.

HARTMAN, FREDERICK B., Harvard Medical School, 1934. Dr. Hartman was a surgeon at the Lawrence and Memorial Hospital for more than 40 years and was chief of surgery for 25 years. He was a member of the New London County Medical Association and the Connecticut State Medical Society. Dr. Hartman died 15 January 1999 at the age of 90.

HOLLANDER, JULES S., State University of New York College of Medicine, 1960. Dr. Hollander retired from his Enfield practice of obstetrics and gynecology in 1997. He was a member of the Hartford County Medical Association where he served as a delegate to the Connecticut State Medical Society in the early 1970s, the Connecticut State Medical Society, and the American Medical Association. Dr. Hollander died 22 January 1999 at the age of 63.

MEO, HOPE H., Medical College of Pennsylvania, 1976. Dr. Meo practiced medicine in Waterbury and was affiliated with St. Mary's Hospital. She was a member of the New Haven County Medical Association, the Connecticut State Medical Society, and the American Medical Association. Dr. Meo died 22 January 1999 at the age of 48.

PANETTIERI, ANDREW J., University of Vermont College of Medicine, 1937. Dr. Panettieri was a former chairman of the department of surgery at Bridgeport Hospital. He was an assistant clinical professor of surgery at Yale University School of Medicine. He was a founder of the Bridgeport Hospital Burn Unit that was renamed in 1980 to the Andrew J. Panettieri Burn Unit. Dr. Panettieri created the Connecticut Burn Foundation where he remained active following his 1982 retirement. He was a member of the Fairfield County Medical Association where he served as a delegate to the Connecticut State Medical Society, during the 1960's, the Connecticut State Medical Society and the American Medical Association. Dr. Panettieri died 26 January 1999 at the age of 86.

PIZZO, PAUL S., New York Medical College, 1945. Dr. Pizzo practiced medicine in Hartford and was associated with both Hartford Hospital and St. Francis Hospital from 1949 until his retirement in 1994. He was a member of the Hartford County Medical Association and the Connecticut State Medical Society. Dr. Pizzo died 8 February 1999 at the age of 79.

SCHARDT, WALTER, M., New York University School of Medicine, 1945. Dr. Schardt, an ophthalmologist, opened his practice in Manchester in 1951 and was on the staff of Manchester Memorial Hospital where he served as chief of ophthalmology. He was a member of the Hartford County Medical Association and the Connecticut State Medical Society. Dr. Schardt died 10 February 1999 at the age of 79.

WALTON, LOFTUS L., Johns Hopkins University School of Medicine, 1933. Dr. Walton, an obstetrician and gynecologist for 44 years, practiced medicine at Hartford, St. Francis, and Mount Sinai Hospitals as well as serving as president of the staff of McCook Hospital. Dr. Walton was a member of the Hartford County Medical Association, the Connecticut State Medical Society, and the American Medical Association. Dr. Walton died 21 February 1999 at the age of 91.

* * *

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CALL FOR PAPERS

Members of the Connecticut State Medical Society reading papers before other organi-zations are invited to submit their papers to the *Journal* for consideration. Authors preparing manuscripts for submission to *Connecticut Medicine* should consult **Information for Authors**. This is published in most issues of *Connecticut Medicine* or may be obtained from the *Journal* office. Adherence to the instructions will prevent delays both in acceptance and in publication.

Papers prepared on a word processor should be submitted on a diskette along with the hard copy.

Please send them to:

H. David Crombie, M.D., Editor
Connecticut Medicine
160 St. Ronan Street
New Haven, CT 06511

BOOK REVIEW

The Joys and Tears of a Doctor: How Irish Humor, Dedicated Care and Strong Faith Help to Solve Patients' Problems
by Timothy L. Curran, M.D.. 261 pp. $15.95.
ISBN 0-9640096-5-X, Plainville, Conn: Woodstock Books

For most of us with more than a quarter century in medicine, long enough to remember the world before Medicare, reading about our science and art in those simpler years gladdens the heart. Memory is selective, often glowing more brightly than the reality, but what matter? Timothy Curran has evoked in his sketches of a doctor's life memories in which tunes of the Swing Era can be faintly heard offstage. It seems in retrospect to have been a gentler and kinder world, at least part of the time, and I believe it was.

Dr. Curran grew up in Boston, the son of Irish immigrants, received his M.D. from Boston University School of Medicine, interned at St. Francis Hospital in Hartford, completed his residency in ENT at the Brooklyn Eye and Ear Hospital, had three years in the military during World War II, was discharged shortly after VJ Day, and began practice in Hartford soon thereafter. His stories of medical practice with its joys and tears are told with humor and good sense. The humor, in fact, evokes more than a smile; I read a number of these hilarious tales to my wife, and have even retold them to friends, finding myself laughing even before the punch line!

But the stories throughout reflect a love of medicine, compassion, and, best of all, empathy for his patients. Dr. Curran shares their anxieties and pain, as well as their good fortune—their joys and tears reflected in his own eyes. Although the tales are roughly chronological, picking up a story anywhere in this autobiographical collection never disappoints. In some of them, he himself is the patient, playing a role that most of us often find deeply disturbing.

> My fifty years as an otolaryngologist are filled with happy memories.... The care I extended to those who came to my office was the same kind of attention and concern I expected to find when there was need for relief of my own symptoms....
>
> It came as a shock to have the bitter experience of undergoing surgery at the hands of an uncaring physician. What was more appalling was the response of the dermatologist's medical care evaluation committee (p.233).

He concludes his collection of doctor stories with an admonition to all of us who are reaching the end of our years in medicine: "Like old soldiers, the old surgeon should also realize that although he may want to continue to fight the battle, he must just quietly fade away."

Robert U. Massey, M.D.
Avon

Community Medicine Seminar Series
University of Connecticut Health Center

April 8
Richard G. Marlink M.D., Executive Director of the
Harvard AIDS Institute
will present on the general topic,

"Issues in AIDS Vaccine Development."

Both seminars will be held from 3:00 P.M. to 4:30 P.M. in the Friends Lecture room (LM-034) at the University of Connecticut Health Center, 263 Farmington Avenue, Farmington, Connecticut.
The University of Connecticut School of Medicine designates this educational activity for 1.5 hours per session in category 1 credit towards AMA Physician's Recognition Award.
Certificates of attendance are available for nonphysicians.

Light refreshments are served.
For further information, call Theo Ungewitter at (860) 679-2356

CSMS PHYSICIAN PLACEMENT SERVICE

The Society maintains the Physician Placement Service as a *free* service to the medical profession, hospitals, and communities in Connecticut.

***Opportunities* should be typed, double-spaced copy on letterhead and submitted to CSMS, Physician Placement Service, 160 St. Ronan Street, New Haven, CT 06511 (203) 865-0587 or fax to (203) 865-4997. These will be published as space permits and will be distributed to physicians inquiring about such *opportunities*.**

***Physicians wishing to locate* in Connecticut may call the office requesting opportunities in their specialty. Also, candidates are invited to submit a resume to be kept on file with the Society. An announcement of a physician's availability will be published in two issues of *Connecticut Medicine* as space permits.**

Listing of physicians in the Placement Service does not in any way represent certification by the Society. Investigation of credentials and experience is the responsibility of those seeking applicants for positions.

Announcements on the Physician Placement Service page under Classified Advertising are charged at the regular Classified Advertising rate.

OPPORTUNITIES FOR PRACTICE

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Busy family practice in Stamford seeks board certified family practitioner. Full- or part-time in new, modern, pleasant, well-staffed office. Full, on site laboratory. Good location. Serving private, Medicare, and HMO patients. Hours, salary negotiable. Please call or send CV to: Alan Falkoff, M.D., 992 High Ridge Road, Stamford, CT 06905; telephone (203) 322-7070.

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For Sale: Stamford, Connecticut. Retiring. Solo internal medicine practice. Thirty-five years. All office essentials. EKG, x-ray, small lab. Several HMO affiliations. Current five-person coverage group. Very reasonable. Please respond to: IM/JG c/o CSMS.

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MEDICAL DIRECTOR

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PART-TIME

The Connecticut Disability Determination Services is looking for physicians with a background in internal medicine, family practice, or psychiatry who would be interested in performing case reviews on a part-time basis. Our agency administers the Social Security Disability program in the State of Connecticut and provides employment opportunities for physicians who find themselves at career crossroads such as transitioning to retirement or facing the demands of career and family. We offer flexible hours without the demands of a practice. The case reviews involve reviewing existing medical evidence of record and determining if the medical requirements of the Social Security Disability program are satisfied. Initially 10 to 12 hours a week are offered at a rate of $47.00 to $52.00 an hour. Please contact Jan S. Gilbert, Professional Relations Coordinator, Disability Determination Services, 10 Griffin Road North, Windsor, CT 06095; telephone (860) 298-2105.

Pediatric group in lower Fairfield county has opportunities for pediatricians, physician assistants, or nurse practitioners who wish to "moonlight" evenings and Saturdays. Interested parties please fax CV to Denise Kinsella at (203) 857-5649.

Primary Care physician wanted for multi-specialty group. Part-time possibly leading to full-time. No evenings, no on-call, no weekends. Excellent starting salary. Please call (203) 795-9745.

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PHYSICIANS WISHING TO PRACTICE IN THE STATE OF CONNECTICUT

FAMILY PRACTICE

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INTERNAL MEDICINE

Available July 1999. Licensed in Illinois, Connecticut pending. Passed National Boards. American Board eligible. M.D. at Odessa State Medical School, Odessa, Ukraine. Internship and residency at University of Illinois at Chicago/Christ HMC. Extensive training and experience in internal medicine/primary care. Seeking to join a group or associates practice. Please respond to: IM/EM c/o CSMS.

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Available July 1999. Licensed in New York and Connecticut. Passed National Boards. American Board eligible in internal medicine and pediatrics. M.D. at New York Medical College. Internship and residency at St. Vincents Hospital and Medical Center of New York. Seeking a primary care position in southeastern Connecticut. Please respond to PC/YL c/o CSMS.

PAID CLASSIFIED ADVERTISING

All PAID classified advertising orders, correspondence, and payments should be directed to: CONNECTICUT MEDICINE, Classified Department, 160 St. Ronan Street, New Haven, CT 06511, Tel. (203) 865-0587. The Classified rates are as follows: $60.00 for 25 words or less; plus $1.00 each additional word. For confidential answers, the cost is $3.00 per insertion, sent in care of CONNECTICUT MEDICINE. Ad copy must be typewritten, double spaced, with payment, and delivered no later than the first day of the month preceding the month of issue.

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Yale School of Medicine Becomes First Site in Connecticut to Offer Test for Cervical Cancer Risk Factors

A new test which helps physicians identify women who are most at risk of having or developing cervical cancer is now available through the School of Medicine's department of pathology, the first site in Connecticut to offer this diagnostic tool.

The HPV (human papillomavirus) DNA test is an FDA-approved laboratory test which detects high-risk HPV infection of the cervix, which is the most important risk factor for cervical cancer in 95% of all cases. Used in conjunction with the Pap test, the HPV test helps in determining the best course of treatment for women with slightly abnormal Pap smears.

In women whose Pap smears contain atypical squamous cells of undetermined significance (ASCUS), a positive HPV test reveals risk of an underlying high-grade (precancerous) lesion and suggests that a biopsy should be obtained for definitive diagnosis. A negative HPV test, on the other hand, provides assurance that the risk of cervical cancer in the immediate future is very low and eliminates the need for colposcopy, a specialized pelvic examination, and biopsy.

"The HIV test adds new sensitivity and specificity to the PAP," says Janet Brandsma, Ph.D., associate professor of comparative medicine at the Yale School of Medicine. "The two tests work well together. When you do both tests, you have more faith in following a patient conservatively if the result of the HPV test is negative, or alternatively, in determining to move forward with biopsy if the result is positive."

Peter Schwartz, M.D., director of the Gynecologic Oncology Research Program at the Yale Cancer Center, adds that the HPV test "will also have a significant impact on health care costs by eliminating unnecessary diagnostic tests and treatments."

In the near future, the HPV test may even be used to detect women at risk of cancer who have normal Pap tests, since the HPV infection precedes the development of a lesion. Recent research indicates that women with high-risk HPV and normal Pap smears have a 10% chance of developing a cervical lesion within two years.

More than 10 million American women are infected with high-risk HPVs, which are transmitted through sexual contact. Since pain or other symptoms are not usually associated with cervical infections, most women are not aware that they have been infected. The majority of cases resolve themselves without treatment, but in some women, the virus causes lesions with a potential to progress to cervical cancer.

An estimated 15,000 American women are diagnosed with cervical cancer each year. Of that number, nearly 5,000, or one-third, die from the disease. When detected at an early stage, however, cervical cancer is one of the most successfully treatable cancers with a five-year survival rat of 91%.

Yale is conducting a research study of the HPV test to determine its value for women in the Greater New Haven and shoreline areas who have slightly abnormal Pap smears. Connecticut physicians are eligible to enroll up to 10 patients. As part of the study, the HPV Diagnostic Laboratory will perform the HPV test at no cost. Participating physicians must agree to follow HPV-negative patients by a repeat Pap test after six months and to refer all HPV-positive patients for immediate colposcopy and biopsy. For more information on the study, contact Deborah Blood at 370–4929.

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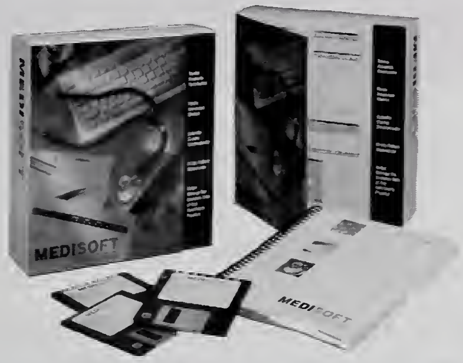

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The Journal of the Connecticut State Medical Society

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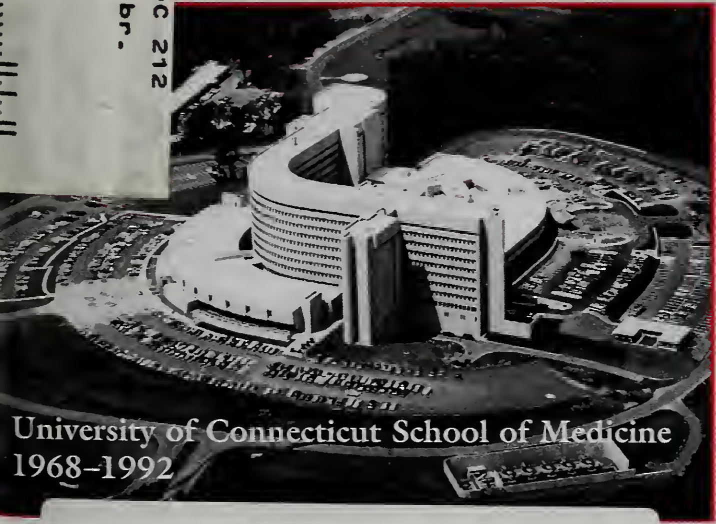
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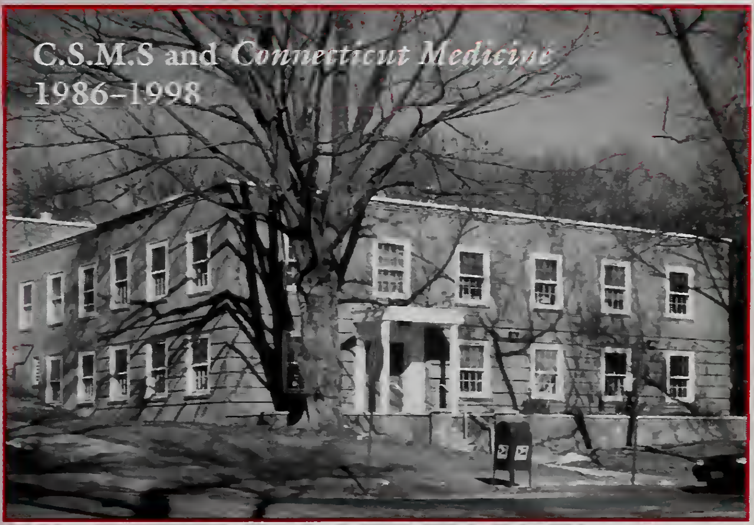
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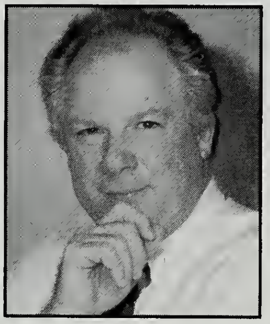

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Festschrift Issue: For Robert U. Massey, M.D.

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In Tribute

For this April issue, four months after our friend, Dr. Robert U. Massey, stepped down as editor, we at *Connecticut Medicine* honor him with a special *festschrift* edition of the journal. It was planned without Dr. Massey's knowledge based on our belief that he would endure a bit of embarrassment more ably than we would resist the strong disapprobation of our self-effacing honoree.

The cover illustrates four professional milestones in Dr. Massey's career: Henry Ford Hospital in Detroit, where he served as intern and resident in medicine; the Lovelace Clinic, where he was a medical practitioner, chairman of the department of medicine, and director of education; The University of Connecticut School of Medicine, arriving as associate dean, and professor of medicine, becoming dean in 1971 and later professor of community medicine and health care; Connecticut State Medical Society, home of *Connecticut Medicine* which he has served as the consummate editor and contributor.

The heart of the special section is all Bob Massey. Largely through the efforts of Dr. Ralph Arcari, Director of the Lyman M. Stowe Library at the University of Connecticut Health Center, the Robert U. Massey History of Medicine Society was established. The first address, given by Dr. Massey on October 14, 1998 as *Reminiscences,* is published here. In it the reader will find the author scrupulously avoiding the autobiographical spotlight while shining the light of recognition upon his mentors and heroes and lifelong colleagues in medicine and at home. Since that recounting ends with the start of his "Connecticut period," your editor has appended an update covering that epoch which draws heavily upon Bob's own piece, "The University of Connecticut Health Center—The First Two Decades," published in *Connecticut Medicine* in November 1992.

The next section is the most risky because it represents a selection of Dr. Massey's prodigious monthly "Reflections." They began as "Reflections from the Dean's Office" in July 1973; under his editorship they have continued as "Reflections on Medicine" with the same clarity of thought, grounded in the same bedrock values of life and the profession of medicine, from 1985 to the current issue—a total of 310 essays! The reader will perhaps understand the risk of selecting those few that space will permit which best represent the ideas and style of Bob Massey as writer, and best capture those values. My first intent was to cover more pieces by exerpting from them. I soon learned that every worthy literary (or verbal) presentation has a beginning, a middle and an end, and does not permit extracted sentences or paragraphs to stand, in the nude, undressed by the preceding and following thoughts. I concluded, and was supported in consultation with my literary editor, Sherwin Nuland, M.D., that what was in these essays was entirely wheat, and any chaff had likely succumbed as crumpled paper on the floor of Dr. Massey's study. What is reprinted here therefore represents an editor's selection of some of Bob Massey's finest essays. In them one will find reference to more of his "heroes": Bacon, Carlyle, Sir Thomas Browne, Hippocrates, Plato, Holmes, Lister, Osler (of course), and many others. Their presence though, does not overshadow the "heroic" dimensions of the writer himself—a hero at a time, and in a profession that begs for heroes.

The festscrift issue concludes with letters to the editor—letters of tribute from Dr. Massey's friends and colleagues that they were pleased to write for this publication. It is fitting that these expressions of respect and admiration should appear in print—for Dr. Massey and for posterity. I am reminded of the events surrounding Sir William Osler's departure from Johns Hopkins in 1905 to become Regius Professor of Medicine at Oxford. There was great consternation in Baltimore and speeches and accolades were showered upon the great physician. Cushing wrote:

> "Such an unrestrained outpouring of appreciation for what he had done, of regret at his departure; such a demonstration of love and affection on the part of students, alumni, faculty, and community few teachers have ever received. Most men would have to live after death to know how others really regard them, but it fell to Osler's lot several times in his life to have paid to him in public the embarrassing tributes usually reserved for obituary notices."[1]

Cushing as teacher had a lesson for us. Don't withhold praise from praise-worthy people; ergo these letters, indeed this issue to honor Dr. Massey, who adds editor-emeritus to his other distinguished emeriti.

continued on next page

Of Joseph Garland, M.D. medical writer and editor of the New England Journal of Medicine, 1947–67, it was said,

"His was a quiet eloquence. Informed with erudition, wisdom and humor, his writing never sounded the strident note. He felt deeply about many issues; he never hesitated to express his convictions, but always in terms acceptable to supporter and adversary alike." [2]

This expression of regard could be borrowed to describe Dr. Massey's writing-editing career. Fortunately, we have not seen the last of it.

H. David Crombie, M.D.
Editor

REFERENCES

1. Cushing, Harvey, The Life of Sir William Osler – Vol I Oxford Clarendon Press 1925
2. O'Leary, Robert, New England Journal of Medicine 289(12); 641-42 Sept. 20, 1973

CALL FOR PAPERS

Members of the Connecticut State Medical Society reading papers before other organizations are invited to submit their papers to the *Journal* for consideration. Authors preparing manuscripts for submission to *Connecticut Medicine* should consult **Information for Authors**. This is published in most issues of *Connecticut Medicine* or may be obtained from the *Journal* office. Adherence to the instructions will prevent delays both in acceptance and in publication.

Papers prepared on a word processor should be submitted on a diskette along with the hard copy.

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Reminiscences

Presented to the
Robert U. Massey History of Medicine Society
on 14 October 1998

Robert U. Massey, M.D., Dean, *emeritus*, School of Medicine
University of Connecticut

Otto von Ranke, the German historian of the last century, urged that history be told "*wie es eigentlich gewesen ist.*" That, of course, is impossible, since history is always told from the story teller's point of view, and always selectively. Another historian remarked that all autobiography and autobiographic details are lies. But I have been has asked to talk about the changes that I have seen in the past 50 years, and I can't do that without autobiography slipping in.

My earliest awareness of medicine came when I was five years old. A young doctor, Dr. Earl Lutz, had moved next door to us in Detroit; he had graduated from the University of Michigan, where, I later learned, he had had part of his clinical training in the homeopathic hospital. He had recently finished his internship, probably at Grace Hospital in Detroit. My father was planing a screen door, cut his finger badly, and I was sent to get that new doctor next door. Dr. Lutz dressed the wound, all went well, and he became our family doctor. He later removed my tonsils and adenoids on the dining room table, with his nurse pouring open-drop ether. When I was eight he treated me for lobar pneumonia, using among other pills and syrups, three glasses daily of a homeopathic solution, one drop of tincture of iodine to one quart of water. Sometime after this, Dr. Lutz began taking me with him on house calls—I remember clearly his blue five-passenger Buick coupe—and brought over anatomy books for me to read.

At about this same time, 1930 or '31, my Aunt Pauline gave me Logan Clendening's book, *The Human Body*. I read and reread it. I still have it. There was no question that I was going to be a doctor. Also in 1931 my father developed osteomyelitis involving his right tibia: the orthopedic surgeon at Grace Hospital, Dr. Frank Curtiss, removed most of the tibia, saucerization he called it, and my father was hospitalized for one month. On Saturdays, when I came to the hospital with my mother, Dr. Curtiss took me on hospital rounds with him. On my father's cast he had carved, "A Curtiss Product."

In high school I took Latin, biology, chemistry, and physics, and all the math I could get, and taught myself German. But I also took journalism instead of English comp, and our teacher, Eva Marie van Houten, was to be my all-time favorite. She was sponsor for the school paper, The Redford *Outpost*, a triweekly, and in my senior year I was editor of both the *Outpost* and the Year Book. Miss van Houten was certain, however, that I would go on in medicine, and gave me a graduation gift, *The Story of San Michele*, by Axel Munthe. It was the romanticized memoirs of a doctor.

I entered Oberlin College in the fall as a premed, but also went to work as a reporter for the college newspaper, the *Oberlin Review*, which was published twice weekly. During my sophomore year, the *Review* staff was invited to Cleveland to put out one whole issue of the *Cleveland Plain Dealer*. I was by then issue editor—that is I edited one of the semiweekly issues of the *Review*, a job that paid my tuition, and was editor-for-a-day of the *Plain Dealer*. I was hooked, and from that point on I determined to be a journalist—editor of *Time*, no less!

I met June Collins, a violin major in the Oberlin Conservatory, that year, and by spring we were going steady. Both her father and her grandfather had been physicians, and she asserted that she intended to marry a physician. That was the end of journalism. June graduated and landed a job teaching violin at the Grand Forks Conservatory of Music in North Dakota. I returned to Oberlin, took both organic chemistry and quantitative analysis to catch up. On December 7 the country went to war. June and her mother came by bus from Grand Folks to Detroit to spend Christmas with us, and she and I drove to Ann Arbor for my interview with Dean Furstenburg. As we parted, the dean told me I was admitted—just like that! June returned to North Dakota and within a month her boss was drafted. I persuaded her to come to Detroit, and I transferred from Oberlin to the University of Michigan to complete my last semester as an undergraduate. June had applied for and received a teaching fellowship in violin at the University that would pay $1,500. My father, who was director of science education for the Detroit Public School system told her she could make $2,500 teaching strings in the public schools, more if she taught in summer school. She accepted.

I entered medical school in the summer of 1942, finished my first year at Ann Arbor, and on the last day of finals, my father picked me up, and we drove to Detroit where June and I were married in my parents' living room. June and I drove to our cottage at Lake Tippecanoe in Indiana for our honeymoon, returned to Detroit on Monday, and on Tuesday I landed a job at Parke-Davis paying 85 cents an hour. We decided that I should transfer to Wayne University School of Medicine, and I began my second year there in August, continuing to work part time at Parke Davis until December. By then, all male medical students were in uniform, either army or navy, except for me! All of us had earlier been commissioned 2nd lieutenants in the reserve corps to avoid being drafted while in medical school. Later we were asked to resign our commissions, reenlist as privates, and the government would pay medical school tuition and fees. When I found that because of my scoliosis I would not be accepted as a private, I declined to resign my commission. So while all my fellow students came to school in uniforms, Maggie Zollinger, Esther Szefner, and I were the only civilians in a class of 55! Tuition was then, as I recall, about $45 a semester.

I can recall most of the faculty at the school in those days: there were two faculty members in each of the basic science departments; the dean's office comprised the dean, who was also chairman of pathology, and his secretary, and in medicine there were four full-time faculty. This was wartime, and some faculty members, mostly surgeons, were serving in a special unit overseas. As I recall the basic science departments at Michigan in 1942-43, these numbers were comparable. Wayne's major teaching hospital was Detroit Receiving next door, but Michigan Childrens, Hermann Kiefer, and Florence Crittenden served for pediatrics, infectious diseases, and ob-gyn respectively.

Each of the basic sciences had their own teaching laboratories, and we were in the lab every afternoon, all afternoon, until 5 o'clock. Physiology was whole organ physiology; cellular and molecular biology were far in the future. We recorded the heart rate, blood pressure, and respirations of our experimental animals on smoked-drums, dipping them in shellac to keep as permanent record. Until I began my clinical rotations I worked as a lab assistant with the professor of physiology, Hans Haterius. At that time we were testing antihypertensive drugs from Parke-Davis. For pay I also took care of the dog colony, and collected the urine and feces of the experimental animals.

Our textbook of pharmacology was Goodman and Gilman's *Pharmacological Basis of Therapeutics*, first edition. Penicillin, streptomycin, cortisone, ACTH, folic acid, vitamin B12, antihistamines, propylthiouracil are not mentioned. Fifty-six pages were devoted to the sulfonamides, clearly the most exciting drug going. Fritz Yonkman, our professor, repeatedly reminded us we could count all the useful drugs on our ten fingers. We were each given a small black pocket-sized book—it looked like a prayer book—called *Useful Drugs*. We would need no other.

We learned physical diagnosis by practicing it on each other, with an occasional visit to the wards to listen to a mitral presystolic rumble, percuss a patient with lobar pneumonia, watch and maybe participate during a neurological exam on a patient with tabes dorsalis. The chairman of medicine, Gordon Myers, taught the course, and all our history taking was taught by Muir Clapper, his younger assistant professor. During our clerkship years Dr. Myers or Dr. Clapper were our preceptors, sometimes accompanied by Paul Noth, or the only woman professor, a young African American woman, Marjorie Peebles-Meyers, a first-rate clinician.

Gordon Myers was a hero. He was brilliant at the bedside, devoted to medicine, in the hospital all day, often until late at night. He had graduated from Michigan, class of 1928, and had done his postgraduate work at the Brigham. He surprised me during my senior year by calling me into his office to tell me that he had secured an internship for me at the Brigham. We had never spoken of this, and I was overwhelmed. But June was pregnant and we were expecting our first child in March, about the time of my graduation; we knew we could never make it on a Brigham intern's stipend. No one considered borrowing money in those days. I had applied at the Henry Ford Hospital where interns were paid $150 a month, plenty to live on in those days. Henry Ford himself had set the stipend with his declaration 25 years earlier: "Nobody works for Ford for less than five dollars a day!" I figured my chances were minimal, since Ford Hospital had never taken a Wayne graduate; in fact, since almost all their senior staff were from Hopkins, their housestaff traditionally came from Hopkins, Harvard, Yale, or Michigan. Intern candidates took an all-day written examination, followed by a full day of interviews. Walter Zimmerman, a close friend, and I had both graduated cum laude and had both applied to Ford without great expectations. We were both accepted!

I began work on April 1st on the busiest medical unit, and for a week or so felt overwhelmed. The Ford staff were, like the Mayo Clinic, all full time. Their offices and outpatient clinics comprised half the hospital. They were for the most part dedicated teachers. The housestaff ran the inpatient side of the house, at that time about 600 beds. Only interns could dictate orders; only nurses could write them! Residents and senior staff made notes after their twice a day visits, but never dictated orders (except in emergencies). In fact the patient's clinical record, including both current and past inpatient and outpatient notes, lab, and X-ray reports, was kept in the "doctor's office" on each unit;

nursing notes, TPR charts, and orders were kept separately in the nurses station. These nurses stations were round units in the center of each inpatient floor with a clear view of the call lights over each room. Again, Mr. Ford's idea. The hospital bed with cranks at the foot to elevate the head and the legs was a Ford invention.

Henry Ford had had a major hand in designing the hospital, selecting the first staff, all from Hopkins, and setting up the staff organization following the Mayo model. Frank Sladen, the physician-in-chief, had been the Resident in Medicine at Hopkins when he was recruited in 1912. Halsted's chief resident, Roy D. McClure, was recruited as surgeon-in-chief. Drs. Sladen and McClure appointed most of the section heads, many of whom were on board when the hospital opened in 1915. They in turn recruited their departmental associates, mostly from Hopkins. It was Ford's idea that only his full-time physicians be permitted to practice in his hospital. "After all, I don't ask every person who wants to build a car to come to my factory to build it. Why should not the hospital be responsible for the medical work done there?" Ford also insisted on a uniform reasonable fee schedule—no sliding scale. But no one was refused care either. Because they were salaried, for many years Ford doctors were denied membership in the Wayne County Medical Association, the state society, and AMA.

With few exceptions that same staff was running the hospital in 1946. Dr. Sladen was clearly in command of the place; the hospital superintendent, Isaiah Peters, was invisible. The Board of Trustees was mostly the Ford family, which meant Henry and Clara B. Ford, their grandsons, Benson and Henry II and their wives, Drs. Sladen and McClure, and the treasurer of the Ford Motor Company. No question, the hospital operated under a benevolent dictatorship. No smoking was permitted by any Ford employee in the hospital or on the grounds. Any staff member could purchase one of "the Ford fine family of cars" at factory price plus 25 dollars.

Residents in their first and second years rotated through the various sections of medicine, beginning with general medicine, which included hematology, rheumatology, peripheral vascular diseases, infectious diseases, industrial medicine, and the so-called new patient group for first-time visits. The other specialty clinics were cardiorespiratory, metabolism, gastroenterology, dermatology, allergy, and neuropsychiatry. Residents saw all new patients in those specialty units, could admit them to the hospital, and continue as their physicians of record. Divisional rounds were made by all members of the section together, so that all the senior cardiologists, fellows, and the residents rotating through cardiology saw all the cardiology patients in the house each day. Hospital rounds usually began at three o'clock in the afternoon and lasted until six or after. Interns and third-year residents constituted the inpatient physician staff and made their rounds in the morning at 8 o'clock, and again in the afternoon with the senior staff and residents. As interns we were on the floor by 7 or 7:30 A.M. to draw all bloods, start IVs, and give all intramuscular injections, mostly penicillin, and IV medications—mostly mercuhydrin and aminophyllin. Initial laboratory work, including blood counts, urinalysis, stool guaiacs, and sputum smears were done at the time of admission by the interns. Attendance at Grand Rounds on Friday morning was mandatory. Interns presented the cases and gave a brief discussion; I clearly recall two of mine: one, a case of murine typhus; the other, an amoebic abscess of the liver.

In those far-off days, the term health care was unknown, as were health-care industry or health-care provider. There was no outpatient care insurance. We all thought of medicine as a calling, a vocation, the best in the world. It was never a job! Several differences from today's inpatient environment are worth noting.

The laboratory and radiology played a less important role than today. Technology had changed little in twenty years, and would not change much for another twenty. We had been taught that we should be 90% sure of our diagnosis by the time the history was completed; 95% sure after the physical exam. We committed ourselves in the record to the differential diagnosis, listed in the order of probability. There was no problem list. Lab and radiology either confirmed or surprised! All patients on admission had a CBC, sedimentation rate, urinalysis, serology, and a chest film. Other tests might include a hemoglobin, hematocrit, nonprotein nitrogen, cholesterol, blood sugar, total protein and albumin/globulin ratio, thymol turbidity and cephalin flocculation—liver function tests that you have never heard of—, BSP, van den Burgh, icterus index, serum calcium, phosphorous, a CO_2 combining power, and a prothrombin time. The only test of thyroid function was a basal metabolic rate. Electrolytes, Na, K, and Cl, took at least 24 to 48 hours, and were reported in milligrams percent, not millequivalents. Not until 1949 did the hospital acquire a flame photometer. Laboratory tests were expensive, with blood chemistries costing about five dollars for each test when the daily room rate was fifteen dollars, and the average patient's weekly wage about eighteen dollars.

Electrocardiograms were recorded on photographic film using an Einthoven string galvanometer. This elegant machine was enclosed in a varnished mahogany chest on wheels, about the size of a small credenza. Once completed, the tracing was developed in a dark room in the cardiology department. It took 24 hours to obtain a mounted tracing, although one could go to the dark room and fish out with a broom stick the coil of film you were looking for. We did not acquire a direct writing instrument until 1948 or '49, and no one trusted it much.

Most admissions occurred late Sunday afternoon, most discharges on Saturdays, and hospital stays of a week or longer were usual. Although the days were filled, the pace was slow. The intern or resident had an opportunity to follow the patient's disease from beginning to end. Emergency events were acute myocardial infarction—more frequent in those days—, acute pulmonary edema, diabetic acidosis, Addisonian crisis, malignant hypertension, and Graves' disease. Myocardial infarction patients, if they survived the first 24 hours—remember, there were no pacemakers, no defibrillators, no way to maintain blood pressure in cases of pump failure, no CPR—were in for a minimum of six to eight weeks. The only treatment modalities were oxygen tents, morphine, atropine, digitoxin, and quinidine, with mercuhydrin and ammonium chloride as diuretics. Ford Hospital was part of a nationwide study of the effectiveness of dicumarol in reducing mortality following acute MI. Every other coronary admission received dicumarol unless there were contraindications.

Many patients were admitted for diagnostic work-ups—they were for the most part, the worried well. Almost all work-ups for gastrointestinal symptoms were admitted. Most turned out to be healthy, and were treated with a quarter or eighth of a grain of phenobarbital four times daily, and 12 drops of tincture of belladonna before meals. It almost always worked wonders. If a duodenal ulcer was discovered, the patient remained in the hospital until there was radiologic evidence of healing. Treatment included whole milk or half-and-half every two hours around the clock, with aluminum hydroxide gel on every alternate hour. And of course phenobarbital and belladonna. The tired-well were often admitted for a thyroid work-up and maybe a psychiatric consult. If their BMR was less than 15, and it often was, they were started on small doses of thyroid, maybe some phenobarbital if they seemed tense.

Although I was a medical intern, Michigan law required a rotating internship for licensure. Therefore we each had a month of surgery, OB, pediatrics, and pathology. The 1946 intern year, the first following the nine-month wartime internships, was 15 months, so we still had 11 months of medicine, including neuropsychiatry.

Psychiatry rounds with Dr. Thomas Heldt, who had trained under Adolf Meyer at Hopkins, were an eye-opener to most of us. Freud was never mentioned! The key words were psychobiology, introvert-extrovert, and common-sense psychiatry. Electroshock and insulin (hypoglycemic) shock were frequently used, and not only for depression. Dr. Heldt was a white-coat, stethoscope-carrying psychiatrist. All admissions routinely had dental and sinus films, and urine cultures, searching for foci of infection. Restraints were never used and there were no locked doors. Patients who became violently unruly received an injection of apomorphine, and for the next half hour vomited their socks off. A water hose was available at the nurses station, but I never saw it used. Barbiturates were administered freely; Dr. Heldt regarded them as a food for the nervous system, not a drug. The aim of psychotherapy was to correct faulty mental habits and to change attitudes that were destructive to good mental hygiene. Freud was a dirty word.

Pediatrics under Dr. Joseph Johnson was a remarkable experience, and after that September I almost asked for a residency in peds. Dr. Johnson, always Johnny to everyone, was the hospital's token Catholic, as well as their best pianist. His daily rounds on 20-30 patients took all morning, every morning, including Sundays. Johnny would pick up the kids and hold them as we talked about them. His discussions were filled with philosophy, science, humor, and love for kids. He believed that resistance to infection, especially strep and tuberculosis, was markedly impaired when the child was in negative nitrogen and/or calcium balance. He insisted on a detailed dietary and social history. My month on peds, September, occurred during Detroit's annual polio epidemic, and for several weeks we admitted only kids with suspected polio. The place smelled of wet wool from the Sister Kenny packs. I became skilled at performing LPs on children; and also getting a needle into a scalp vein. Johnny was pediatrician for our two children—that fact alone almost kept us in Detroit after I finished my residency in 1950.

My other notable experience was during my surgical rotation with Conrad Lam. Lam was a Yale alumnus whose chief interests were chest and burn surgery. With Drs. McClure, and Davidson, Dr. Lam had developed the tannic acid treatment for burns. When Bob Ziegler came back to Ford from Helen Taussig's service in Baltimore in 1946 prepared to begin cardiac catheterizations, Dr. Lam was at his side. I had the good fortune to scrub with him when he performed the first Taussig-Blalock procedure to be done in Michigan. Lam was a tinkerer, and working in the hospital shop he constructed a renal dialysis machine, from an Easy washing machine; the semipermeable membrane coil was wrapped around the spin-dryer. We used it twice in patients with renal shutdown, once successfully on a young physician whose kidneys had shut down following sulfadiazine therapy. The most exciting news for the cardiology crowd in 1948 was Dwight Harken's and Charles Bailey's successful mitral valve surgery in patients with mitral stenosis.

The Henry Ford Hospital cared for all sorts and conditions of patients, including the Detroit Tigers, the top brass in the auto world, their friends and relations. The unit called B2 was the Gold Coast, where tea was served at 4:00 P.M., and cocktails at 5:30. Among my patients there were Mrs. Benson Ford, Supreme Court Justice Frank Murphy, Judge D.J. Healy (whose family owned the finest women's shops in the city), several monsignors, the vice president of the Ford Motor Company for Labor Affairs, and the union leader, Walter Reuther. My medical school professor of medicine, Gordon Myers, was in for 10 days of cortisone treatment for a sympathetic ophthalmia that was destroying his vision. He asked me if I had time to read to him; I came in with the *New England Journal*, and the *Annals*. He handed me a mystery novel, wondered if I would mind reading him that instead.

I was fortunate to have four months as resident in the tuberculosis unit. Streptomycin and para-aminosalicylic acid had just been introduced for TB therapy, but we relied mostly on bed rest, pneumothorax, phrenic nerve crush, and thoracoplasty. Dr. Lam, that jack-of-all-trades, did the thoracoplasties. He also lysed the pleural adhesions that often prevented a successful pneumothorax. I was responsible for the weekly chest conferences. We had some gratifying successes among the patients that I was privileged to follow for several months. Most stays were for more than a year. One of my favorite novels remains Thomas Mann's *Magic Mountain*.

Dr. Richmond Smith, who had returned in 1949 from a two-year fellowship at the Brigham with George Thorne, was appointed head of endocrinology. He began his work on intermedin, at that time the name of the hormone of the intermediate lobe of the pituitary, and was developing his laboratory in the hospital's Edsel B. Ford Research Laboratory. He asked me to stay on with him after my residency ended in 1950. I almost agreed, but was at that time in correspondence with the Lovelace Clinic in Albuquerque. After talking it all over with June, we decided to go West! Neither of us had ever been west of Chicago, except for June's brief stay in Grand Forks, and we wanted to sample the Southwestern desert for a year or two, and probably return to Detroit afterward. Fifteen years later Richmond Smith was Physician-in-chief at Henry Ford, and I was still in Albuquerque. However, we saw each other frequently at Endocrine Society meetings and later at meetings of the "Big Six," a group of six clinics who met every year to discuss common problems: Mayo Clinic, Lahey Clinic, Ochsner Clinic, Cleveland Clinic, Henry Ford Hospital, and the Lovelace Clinic. But that was later.

The Lovelace Clinic had been started in 1922 by a general practitioner, William Randolph Lovelace, a 1905 graduate of St. Louis University. During his internship he had a pulmonary hemorrhage and his doctors diagnosed tuberculosis. Like many other lungers before him he moved to New Mexico Territory. He got a job as physician with the Santa Fe Railroad, and opened an office in Sunnyvale in the Pecos Valley. He had a bank balance of eight dollars! He was later joined by his brother- in-law, Dr. Edgar Lassetter, and in 1922 they moved to Albuquerque. They were joined in 1929 by Dr. J. Daniel Lamon from the Mayo Clinic and a group practice was underway.

We arrived in Albuquerque on July 4th, 1950. At that time the Lovelace Clinic had a full-time staff of 15 or 16, with offices in the First National Bank Building, in downtown Albuquerque. The city, home of the University of New Mexico, Sandia Corporation, and Kirtland Air Force Base, had a population of 90,000. Sandia Corporation was the manufacturing arm of the Manhattan Project; atomic war heads were manufactured there. Lovelace was building a new clinic building out near the Air Force Base, Sandia, and the VA hospital.

My patient load grew rapidly, and although I encouraged referrals in endocrinology, most of my work was general internal medicine. By today's standards, the pace was comfortable; patients scheduled every half hour, with new patients given an hour. None of us in medicine ever saw more than 10 patients a day. We generally had two to six patients in the hospital, and probably averaged two housecalls a day. In 1953 I became consultant to the tuberculosis unit at Fort Defiance Arizona on the Navajo Reservation, and spent one day every two weeks there with our radiologist, Jack Grossman, and thoracic surgeon, Roger MacQuigg. I was fortunate in being involved with the clinical trials of isoniazide at Fort Defiance under the Cornell group of Carl Muschenheim and Walsh McDermott. Kurt Deuschle was the USPH physician at Fort Defiance at the time. Together, he and I spent a week touring the reservation clinics and hospitals to get some estimate of the prevalence of rheumatic and coronary heart disease among the Navajo. I later presented the coronary heart disease findings in Atlantic City in 1958. His Fort Defiance experience converted Kurt Deuschle from a hematologist into a community health physician of international fame.

In 1947 Dr. Lovelace, always known as Uncle Doc, had been joined by his 39-year-old nephew, William Randolph Lovelace II. Randy had been chief of a surgical section at the Mayo Clinic since the war. He and his wife Mary had lost twin sons in the polio epidemic a year before. In their grief and with Uncle Doc's urging, they decided to come home to New Mexico with their three young daughters. But there were conditions: the partnership that was the Lovelace Clinic was to be dissolved, and reorganized as an association on the Mayo model, with a full-time salaried medical staff. Also a Foundation was to be established and all clinic properties turned over to it. A national board of trustees was to be recruited, and a director of research appointed.

In 1938 Randy Lovelace, already a flight surgeon, along with Walter Boothby and Arthur Bulbulian at Mayo, had designed and tested a new oxygen mask which came to be known as the BLB mask. For this they received the 1940 Collier Trophy. In 1942, Lovelace, now an Army Air Force major, was appointed assistant director of research in the Office of the Air Surgeon in Washington, and a year later was chief of the Aero Medical Laboratory at Wright Field. It was in 1943 that he decided personally to test the equipment he and his team had designed for use in the event of high altitude bailout. He dropped from the bomb bay of a B17 at 40,200 feet. It had been hypothesized that the opening shock of the parachute would be less in the thinner high altitude air; it was not, and he experienced 30 to 40gs when the chute opened, and lost consciousness until he reached 8,000 feet. Because one entire glove had been ripped off by the high g-forces, he suffered frost bite, was unable to handle the chute, and was dragged over rough ground after landing. Regulations were changed; in jumping from high altitude, chute opening must be delayed until 10-15,000 feet. That year he was awarded the Distinguished Flying Cross. He left the airforce in 1945 and returned to the Mayo Clinic. Two years later he was in Albuquerque. In 1964 he was appointed Director of Space Medicine for NASA.

Randy Lovelace was one of the most remarkable men I have ever known. When I arrived in 1950, he was carrying a full surgical load at the clinic, and was busy pulling together a research staff in the foundation. He appointed Clayton S. White, M.D., a Rhodes Scholar, to head up the foundation's research program. Clayton—always known as Sam—had worked on the neurotransmitter acetylcholine with Charles Sherrington during his Oxford years. Incidentally, Sam's brother Byron, Whizzer White, had also been a Rhodes scholar, and was appointed by Kennedy to the Supreme Court. Very quickly a major program was underway to study the physiologic and anatomic effects of a nuclear explosion: blast, heat, and radiation. A number of foundation scientists were always present at the Nevada tests. A new facility was built out in the desert at the base of the Manzano Mountains for this work. A frequent visitor in these days was Solomon Zuckerman, later Sir Solomon, an anatomist and authority on the pituitary, who had studied the effect of blast on human tissues and organs during the bombing of London. An extensive pulmonary function lab was set up under the direction of Ulrich Luft, a former Luftwaffe Colonel who had been chief of aviation physiology at Berlin's Aeromedical Research Institute from 1942-1945. Ulrich spoke perfect English, his mother was Scottish, and he had spent all his childhood summers in Scotland. His was one of the most impressive intellects I have ever known. Brigadier General Albert Schwichtenberg, a retired Air Force scientist, joined the foundation to head up the space research program. He is a prominent character in the movie "Right Stuff." Another distinguished scientist was Jazek Szafran, a psychologist from Cambridge University, earlier a Spitfire pilot in the Polish group of RAF fliers who had escaped both the Russians and the Germans and somehow made it to England. He designed all the bizarre neurological and psychological tests for the first group of astronauts. June worked for him as research assistant for two years during this time, and met and tested all the early astronauts, even including Gary Powers, who was shot down over the Soviet Union.

Because of my close friendship with both Randy Lovelace and Sam White, and because we were neighbors, and both were patients of mine, I was very much caught up in the Foundation's programs. When I returned to Albuquerque after a two-year stint in the Army in Washington, D.C., I was appointed to the Board of Governors and was made chairman of the department of medicine. I worked with Randy and others in recommending the physiological support systems for the first mercury capsule.

Randy and I served together on the Western Interstate Commission on Higher Education which ultimately recommended 11 new medical schools for the Western states. We also served on the committee of the New Mexico Medical Society to plan for a medical school at the University and worked with the University to make that a reality. When that encountered stumbling blocks, we began to talk of a Lovelace medical school just as the Mayo Clinic was moving in the same direction. Why not? We already had a full basic science faculty, outpatient clinics and hospital, a well-funded research program, and affiliations with three medical schools. We had the best medical library in the Southwest, and a very well-heeled Board of Trustees.

The Golden Age of American medicine was well underway. We had moved from organ biology to cellular biology to molecular biology. DNA and cracking the genetic code was the great amazement of the time. We could replace an aortic valve. Within a few years we would be able to defibrillate a quivering ventricle. Cardiopulmonary resuscitation really worked, sometimes. In 1957 the clinic had just acquired dialysis capability. We had a cobalt bomb for radiation therapy. A new research building was underway, and the top floor would house a computer, the only one in the Southwest. The foundation was asked in 1958 to accept responsibility for the medical selection of future American astronauts. There were 32 volunteers in the first group who entered Lovelace in February 1959. Their experience there has been made into a movie, "Right Stuff," which I have never seen!

Reginald Heber Fitz, the first medical school dean, arrived in 1960, and the medical school was about to be for real. Faculty appointments began, the first being Solomon Papper to head the department of medicine. We worked hard to link the clinic and the medical school, but ran into opposition from the town physicians, as well as some of our own who thought a close medical school linkage would end in their taking us over. Randy and I were most eager for the affiliation; he even suggested turning the entire clinic and foundation over to the university.

The Johnson administration's Regional Medical Programs, Heart Disease, Stroke, Cancer and Related Diseases, had been on the drawing board, and we feared that New Mexico would be lumped with Texas. I believe it was Randy's influence in Washington that prevented that. We saw in that program another way to link our two institutions, and I was given a part-time appointment at the medical school to strengthen the affiliation. The first class was admitted in 1964, and we participated actively in the clinical teaching programs. The University's residency program at the Bernalillo County-Indian Hospital, the VA Hospital, and Lovelace were combined into a single medical residency.

Medicare came in 1965. Clinton P. Anderson was our senator, and as you know, the first Medicare proposal was known as the King-Anderson Bill. The senator was a patient of mine, and well known by the Lovelaces and our Board. We supported Medicare, a fact that did not increase the love of organized medicine for "that damned clinic out on the mesa!" It made our close liaison with the medical school more problematic.

Then in December 1965 tragedy struck. I was attending a meeting at the University and was called out of the room for a phone call. It was Randy. He said he and Mary were going to fly to Aspen to finalize plans on a house they were building there. His uncle was opposed to their plans, so Randy asked me, if Uncle Doc called to ask if I knew where they were, to tell him that they had gone up into the mountains for the weeekend. "Tell him I've gone to chop wood!" he said. On their return trip on Sunday, December 12, in a Beechcraft twin-engine plane, the pilot—it may even have been Randy himself, even though the Foundation Board had forbidden him to pilot a plane—made a wrong turn into a box canyon, and by the time he realized his mistake, the canyon walls had closed in and a 180º turn was not possible. The crash into a snow-filled canyon was entirely silent.

When I drove into the clinic parking lot on Monday at 7:30 a.m. Randy's car was not there, unusual because he was usually in his office by 7:00 at the latest. We called Aspen airport; they had left the day before at 3:00 in the afternoon in perfect weather. The Air Force was immediately called out, but their plane was not spotted in the canyon until Tuesday. Ulrich Luft, the foundation scientist, alpinist, and cross country skier, finally made it into the canyon the next day. All three were dead. Ironically, that December 15 was the day of the "rendezvous deep in space" program Randy Lovelace had done so much to advance. We commented to one another that Randy was right up there with them.

After that, all enthusiasm went out of the clinic like a balloon deflated. Randy Lovelace had been a rare charismatic leader who radiated intelligence, boundless energy, and good will. Uncle Doc was too old and depressed to take on leadership responsibilities; the senior member of the group, the radiologist Jack Grossman, took over, but Jack hated administration, and, like all of us, was depressed. The business manager gradually usurped control, and we entered a time of uncertainty and infighting. In 1967 the medical school faculty asked for Dean Fitz's resignation, and he became director of the Regional Medical Programs; Sol Papper left to take a position as cochairman at University of Miami. Robert Stone, the chairman of pathology was appointed dean, and he asked me to join him as associate dean. Dr. Papper wanted me to join him in Miami and manage the department's clinical programs. And I received a letter from John Patterson asking me to consider being associate dean for graduate medical education at a new school in Farmington, Connecticut. I had also reopened talks with the Henry Ford Hospital. It just seemed to June and me, after 18 wonderful years in Albuquerque, that it might be time to try something new for the next 18 or 19 years.

When I left the Lovelace Clinic there were 30 of us in the department of medicine and 75 total doctors in the clinic. Now there are over 350, and there are satellite clinics all over the state, but the clinical operation is under CIGNA! According to the old timers still in town, the quality of care is nothing like it used to be.

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Robert U. Massey, M.D. Biographical Continuation

H. DAVID CROMBIE, M.D.

Transitioning from the autobiographical to the biographical, we pick up the story of Dr. Massey's distinguished career, after his 18 years at the Lovelace Clinic, with his "Connecticut Period" which began in 1968. When Special Act 328 was passed by the Connecticut General Assembly in 1961, authorizing the establishment of a medical and dental school for the University of Connecticut, debates, both medical and political, had been ongoing for nearly 20 years. The age-old issues of location and relationship with existing institutions proved thorny, as always, and their legacy extends visibly into the present.

After a McCook Hospital site, and an adjacency and partnership with Hartford Hospital were rejected, land at the Farmington site was purchased in 1962. Dr. Lyman Maynard Stowe, an associate dean at Stanford, was recruited as dean of the new School of Medicine. He selected Dr. John Patterson to assist him and to become professor and chair of the department of physiology. With the sudden death of Dr. Stowe in June, 1965, Dr. Patterson assumed the deanship. Ground-breaking ceremonies took place in Farmington in May, 1966. Admission of the first class of 32 medical students and 16 dental students, originally planned for the Fall of 1966, was put off two years by the preceding delays in planning and construction to 1968, the arrival year of our honoree.

One hundred years earlier another relocating midwesterner, the blossoming writer, Samuel L. Clemens, destined for fame from which Hartford would enjoy enduring reflected honor, described Hartford in such glowing terms to Olivia, the love of his life, that she agreed to marry him and come here. What must Bob and June Massey have thought of the twists of fate and history that had been wrought on Connecticut's capital in that century of time? McCook Hospital and the Veteran's Administration Hospital in Newington served as the new medical school's clinical sites. Temporary buildings had been erected on the Farmington site and at McCook for classes, laboratories, and offices for faculty; the administrative and dean's offices were in leased space with the Hartford Insurance Group; the medical-dental library, now so prized, was housed in Mr. Gengras's Security Insurance building at 1000 Asylum Avenue. If this fragmented and inauspicious-appearing array of physical attributes had a disheartening effect upon the transplanted Masseys, the evidence has yet to surface. The record of the ensuing 30 years in fact denies it.

Dr. Massey was recruited as associate dean for graduate medical education, and with the assumption of Newington Veterans Administration Hospital as a dean's committee hospital he was named Chief-of-Staff there. Dismissing the incohesiveness of the school's physical plant as a temporary inconvenience, Dr. Massey devoted his considerable energies where they would make the greatest difference, indeed would make a medical school, on the faculty and the students. There were many in the ranks of the charter faculty deserving of acknowledgment in their contributions to the success of the new medical-dental school. Two with preceding roles at Western Reserve and key roles here were Dr. Sherwin Cooperstein, a dentist and anatomist who became head of the department of anatomy, and Dr. Carl F. Hinz, Jr., named associate dean for undergraduate education. When Dr. Patterson was asked to move up to the post of vice-president for health affairs and executive director of the health center, Dr. Massey became dean. The year was 1971.

His deanship was to last 15 years, the longest of any of the six who have thus far held the post. In his 1992 review of the first 20 years of the University of Connecticut Health Center, Bob Massey, wrote:

"Every institution continues to carry the characteristic marks of its founders, but these marks become less distinguishing as time moves on; there is an inevitable regression toward the mean."

Graduates of the medical school's first class in 1972, and their successors would likely disagree with their noted dean about his mark becoming less distinguishing. To articulate their view that some, in memory, just don't regress toward the mean, I offer the comments in letters to the editor recorded elsewhere in this issue.

Under Dean Massey the new academic facilities opened in 1972 as the first class of 32 medical students and 16 dental students graduated. Suitable "digs" allowed for a doubling of the size of the first-year class of both schools in that year, and an increase to 80 and 48 respectively in 1975. Anyone, including this writer, who has had the pleasure of practicing

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medicine in concert with some of those graduates, and their successors, along the way will testify to the knowledge, integrity, and humanism secured in their formative years at the school of medicine.

A Department of Community Medicine was established in 1971. By 1974 the study of the humanities, so near and dear to the heart and writings of Dr. Massey, acquired meaningful leadership in this department with the arrival of Dr. Stuart Spicker, a philosopher. The chain of commitment in this area continued with Jay Healey, Giles Scofield, and currently Professor Zita Lazzarini, with expertise in law, medicine, and ethics. The department became a haven for Dr. Massey himself in his dean-emeritus years as he cultivated his interests in the history of medicine, ethics, and philosophy. His secretary in the early University of Connecticut years, Catherine Kennelly, reflected in correspondence with this editor on the literary Bob Massey.

> Eventually, we were able to move from our cramped room (in the Goodwin Mansion in Hartford) to much more spacious surroundings in Farmington. For Bob, it just meant that he had more room to spread out his papers, magazines and books. He was a collector, and nothing was ever thrown out. ... The history of medicine and medical ethics are two of Bob's passions. As a result he was repeatedly asked to write papers and deliver talks on these topics. These were my introductions to Sir William Osler and Thomas Browne.

Dr. Massey's demeanor, leadership, and equanimity built bridges with the medical profession in the community over his 15-year tenure which supported the heavy reliance upon sites beyond the health center for clinical education. Much of this collaboration was accomplished under the umbrella of the Capital Area Health Consortium, the brainchild of Dr. Massey's longtime friend, Dr. T. Stewart Hamilton. The fruits of that collaboration continue in the major area hospitals where an ever-present educational milieu relentlessly advances health-care quality, innovation, and scholarship.

None of Dr. Massey's many distinguished career paths has enjoyed longer tenure than the editor's path. It began in high school, was refashioned in college. While still dean, he became editor of the *Journal of the History of Medicine and Allied Sciences*, now emeritus. With retirement from the deanship (and not much else) he took the helm of this journal in 1986. The quality of the material and the message has never been better than that circulated to Connecticut physicians on his watch, 1986–1998.

Selected Reflections:
Robert U. Massey, M.D.
1979–1998

The Cheerful Physicians
Medical Ethicists or Ethical Physicians?
What About Mortality?
A Matter of Principle
A Half Century of Progress (1936–1986)
In Praise of Being Amateur
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Steering Toward a Tame Death
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The Cheerful Physicians

Reflections from the Dean's Office ... Conn Med 1979; 43:11

ROBERT U. MASSEY, M.D.

LIKE the doublets in the prose of the *Religio Medici,* Sir William Osler and Sir Thomas Browne go together. The two were born 244 years apart, yet for Osler the *Religio* was his *comes viae vitaeque,* his constant companion. He bought his first copy in 1867, and it was that copy which lay upon his bier on New Year's eve, 1919.

In his farewell address before sailing for England and Oxford in 1905, William Osler recalled that three ideals had guided his life: "to do the day's work well and not bother about tomorrow," the second, "to act the Golden Rule, so far as in me lay," and the third was equanimity. The first was the theme of his address to Yale students in 1913: " ... only for this day are we to ask for our daily bread, and we are expressly bidden to take no thought for the morrow." Later came the well-known line, "The load of tomorrow added to that of yesterday, carried today, makes the strongest falter." To face the day without anxiety for the future or remorse for the past requires a faith in the goodness of nature, a cheerful confidence that all things will work out if the work at hand is well done.

The Golden Rule has to do with tolerance and making allowances: "Deal gently then with this deliciously credulous old human nature in which we work."

Most of us still have that gift from Eli Lilly, our graduation copy of Osler's *Aequanimitas,* and although we have forgotten much of it, the title has returned in a thousand difficult times.

"In the first place, in the physician or surgeon no quality takes rank with imperturbability," which Osler described later as "coolness and presence of mind under all circumstances, calmness amidst storm, clearness of judgment in moments of grave peril, immobility, impassiveness, or to use an old and expressive word, 'phlegm.'"

Browne too, living in an unkind and stormy age, had faith in the essential goodness of the world, a cosmos which revealed the art and the wisdom of its Creator ("there are no *grotesques* in nature"):

> "Thus there are two bookes from whence I collect my Divinity; besides that written one of God, another of his servant Nature, that universall and publik Manuscript, that lies expans'd unto the eyes of all; those that never saw him in the one, have discovered him in the other."

Of all times the seventeenth century with its wars of religion must have been one of the most bigoted; against that, Thomas Browne's tolerance comes as a flash of sunlight through lowering clouds:

> "I could never divide my selfe from any man upon the difference of an opinion, or be angry with his judgment for not agreeing with mee in that, from which perhaps within a few dayes I should dissent my selfe,"

and later,

> "For my conversation, it is like the Sunne's with all men, and with a friendly aspect to good and bad."

Browne's equanimity is the substance of his long life, that of a competent good natured general practitioner of Norwich. He lived and worked through Civil War, Cromwell's rule, and the Restoration, faithful to his king and Church. For this he was knighted by Charles II in 1671. In spite of the painful years of puritan rule, Browne never mentions them except in a few lines in the introduction to the *Religio* and in private correspondence. His friend, John Whitefoot, said of him that,

> "He was never seen to be transported with mirth or dejected with sadness; always cheerful but rarely merry, at any sensible rate; seldom heard to break a jest, and when he did he would be apt to blush at the levity of it. His gravity was natural, without affectation." He was certain in company with the fourteenth century anchoress of Norwich, Lady Julian, that, "... all shall be well and all shall be well, and all manner of thing shall be well."

To understand Browne's philosophy requires more knowledge of the intellectual currents of 17th-century England than most of us have. His prose, which has been described as Augustan, need not be dissected to be enjoyed. It is not difficult, and his nature shines through it, just as Osler's character is manifest in his essays and addresses.

They were not unlike. Osler was the better scientist, even allowing for his century, and Browne the better writer. Both men were tolerant humanists, compassionate, imperturbable, essentially conservative, and consciously concerned with high principles and ultimate values. After reading one or the other, we become aware with a start that they were not companions in the flesh.

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Medical Ethicists or Ethical Physicians?

Reflections from the Dean's Office ... Conn Med 1980; 44:9

ROBERT U. MASSEY, M.D.

CURRICULUM committees sitting down to work this month will be looking for ways to squeeze out more time for medical ethics from those 2,000 hours in the medical student's first two years.

The medical humanities are an ascending constellation, and while those who teach them disagree about what it comprises, they know they must vie with the unified six sciences for precious curriculum hours.

In his Shattuck Lecture, . 1980, Daniel Callahan ascribes interest in medical ethics to public concern with professional behavior, to increasing attention by newspapers and television, to the cost of health care, to uneasiness about technology, and to a perception that the system is inhumane, and that it deals with problems which in the past were not considered to be medical.

Within the profession interest has grown because of moral issues raised by new technologies, concerns about the care of the newborn and the dying, questions about using psychotropic drugs, anxieties about the right uses of genetic knowledge, and worries over the equity and distribution of medical care.

Callahan suggests that there may be deeper reasons than those he has listed:

"When questions of ethics are widely and heatedly discussed, it is a good rule of thumb to assume that some larger cultural process is taking place, of which a concern with morality is only one symptom."[1]

It interests me that we see this anxiety about values at the very time when others see a society in moral decline. Perhaps this is the kind of complementarity we should expect. But there is no clean-cut complementarity; no puritan movement standing against a dissolute society; no Augustine against Imperial Rome, but rather moralists accommodating to a secular society.

The unresolvable debates between the relativists and the absolutists will go on: do values change with the times or the situation, or are they eternal? Ought teachers of ethics to espouse values, or should they teach only about values? Will any morality do as long as it can be explained in the categories of behavioral science? Of course it all depends upon standpoints; but standpoints may be points above an infinity apart.

Troublesome stuff for curriculum committees. It may be safer to study history; the medical historians say so. They say that medical history makes for good stories, and that students will draw their own conclusions about the dangers of dogmatism in science, or the power of an idea to set the course for a life or an age.

Perhaps the novelists and the playwrights make the deep issues more easily understood than anyone. T.S. Eliot's "The Cocktail Party" suggests moral dilemmas and compels expressions of fundamental beliefs with an efficiency unmatched by any case study or ethical analysis. Just ask who Sir Henry Harcourt-Reilly is.

Medical students are as caught up in the ethical issues of the late twentieth century as are their faculty and their practicing colleagues. They want serious talk about values, though they lack the time, and most of them the inclination, to master the scholarly language and jargon of formal ethics.

When humanism was literary culture, and science was natural philosophy, the two were distinct in the curriculum and in the minds of their exponents. They are rediscovering each other. Dr. George Sarton wrote, as early as 1927, that "science must become more humanistic and humanism must include science."[2]

In that inclusive sense ethics embraces all of medicine, for essentially medicine is the expression of an ethical relationship between physician and patient. That is not all that medicine is, nor is that all that there is to the ethics of medicine, but the physician must understand the implications of that relationship if he is to be a *good* physician.

Clearly definitions are called for, but there is not enough time for them. The relativist-absolutist debate cannot be resolved, either here or in the classroom. Shaw, Lewis, and others who know about these things have said that it is still being argued in Hell.

For medical ethics, or ethics in general, to work, however, there should be some agreement about what is meant by the idea of virtue. In any discussion about how ethical decisions are made, someone needs to mention that *character* is the element that carries the day when all else fails.

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What About Mortality?

Reflections from the Dean's Office ... Conn Med 1984; 48:9

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SINCE his death this past summer, James Fixx has been the subject of many conversations, especially when there are physicians around to speak with authority on matters of exercise, health, and longevity. What is said in these nervous and often self-conscious exchanges is not especially helpful; jogging is good for you, bad for you, or of indifferent value. The doctors take care to point out that there is little evidence to support any claim, and then talk of moderation and common sense. What is of greater interest is the lurking matter of mortality: "If he hadn't been running every day, we'd have read of his funeral years ago," declared a lawyer. A teacher said jogging made her feel better, "and maybe I'll live longer." Run to ward off death at a time when most of us can count on living longer than ever.

Among the proposals for cutting medical care costs, there are few with the temerity to mention the case for mortality, few that run against the stream to suggest that health may not be the greatest good, may not be worth all this attention and may in fact, like happiness, be achieved only by indirection or by good fortune.

The notion has been around for a long time that contented and good natured persons are healthier and live longer; a corollary tenet ties happiness to hard work and commitment to others, but we hear less about these things now and more about the uses of leisure.

Albert Schweitzer and Arturo Toscanini lived to 90; so did Isaak Walton, and Michelangelo almost made it, but Mozart, Schubert, Shelley, and Keats were gone by 35. At the beginning of the 19th century, life expectancy at birth in Europe was about 30, and, by the end of the century, 45, but since most deaths occurred in the first years of life, these figures tell us little about longevity among adults.

I wondered about the usual age at death for physicians in the 19th century. Fielding Garrison's *History of Medicine* includes about 250 names in the "modern period," approximately from 1800 to 1920; their average age at death was 70, the English and Americans a few months less, the Germans and French a few months more. There were 56 who were 80 or older at the time of death; only one, as you might expect in this group, was under 40. Not bad for a century without intensive care units, and in which tuberculosis and other infectious diseases accounted for one-third of the deaths by reducing mortality in the first decade, medicine and public health have added a score of years to life expectancy at birth; since 1970, another three years, this time mostly by forestalling death.

For comparison, I calculated the average age at death of 250 physicians from the obituary pages of *JAMA* this summer, and found it to be 72 years, or two years more than in the 19th-century sample. There were 80 who were 80 years old or older, but more young deaths, maybe auto accidents, possibly coronaries There were seven women in the second sample, none in the first. I then checked the obituary pages from the spring of 1934, 50 years ago, and found the mean age at death to be 65.

Drawing serious inferences from these figures is unwarranted. In 1934 the *Journal* recorded the causes of death in detail; medical progress in the past 50 years has changed our bills of mortality. But what about the 19th-century group? These men made history. Did the creative work, the satisfactions of discovery increase their years beyond that of ordinary men, or were they the survivors?

In all of the directions for living coming down to us from the past, not much is said about length of life. Most of the attention is given to striving for wisdom and virtue. When immortality is considered, it seems to be about fulfillment rather than length of life, with growth in wisdom rather than an endless succession of days. Seeking more of the same seems to be terribly expensive, possibly futile, and clearly a burden for our children.

Leon Kass, M.D., has written:

> "Mere continuance will not buy happiness. Worse, its pursuit threatens human happiness by distracting us from the goal(s) toward which our souls naturally point. By diverting our aim, by misdirecting so much individual and social energy toward the goal of bodily immortality, we may seriously undermine our chances for living as well as we can and for satisfying to some extent, however incompletely, our deepest longings for what is best."[1]

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A Matter of Principle

Reflections on Medicine ... Conn Med 1985; 49:11

ROBERT U. MASSEY, M.D

"BUT our principles demanded it, and convinced of their virtue, I strove always to be consistent to them."

In her brief essay on *The Health of the Bride,* the painting reproduced on the cover of *JAMA* for June 7, 1985, Kathryn Simmons quoted the artist, Stanhope Forbes, who had written, in 1898, that his artistic creed was "to paint our pictures directly from Nature and not merely to rely Upon sketches and studies which we could afterwards amplify in the comfort of a studio." He observed that this was not always easy to do, Nature being what she was.

Some of our first-year medical students in their seminar on the quality of medical care have been wrestling with this matter of principles in trying to make sense out of this year's fashion—HMOs, DRGs, PPOs, vertical and horizontal reorganization, and on and on—they quickly discover the flaw, the absence of principle, as they come to ask about what is behind this or that scheme, and how it will affect the behavior of physicians, hospital administrators, insurance companies, and patients.

"I'm going to do what I think is right no matter what the bureaucrats or administrators say!"

"Then what if you lose your privileges, or they tell you you can't work for their group or hospital anymore, or Medicare won't pay you?" asks another student.

"So be it. I want to be able to sleep nights."

There are signs of agreement all around, but they know that it will be years before they face the difficult professional choices. Today, the principles are still holding, the idealism that lighted and guided their way into medical school is just now facing the barest suggestion of a challenge.

Principles, like virtue, have fallen from fashion and from intellectual grace, too often when someone begins talking up the "principle of the thing,'' he is about to get himself into or out of some unprincipled act. But trying to make decisions without principles is like trying to do geometry without axioms.

A cartoon in one of the medical newspapers last spring showed a wrecker's ball being swung against the house of medicine; the implication was that the whole enterprise was about to come down; everyone was scrambling to have a say in whatever was to follow. The scrambling certainly is evident, but my hunch is that it is going nowhere. There is a standoff between the doctors on the one hand and all of the government, business, and investor interests on the other who stand to gain financially from the outcome. The doctors are looking for their principles: they remember that they had them when they came into medicine; they recall, with Osler, that "the profession of medicine is distinguished from all others by its singular beneficence."

In an earlier and simpler time we quoted the greats and were satisfied that we had made our point. No one needed to explain Francis Peabody. We appealed to universal principles, but now in an age of moral relativism, one principle is as good or bad as another, and consequently none is good for much of anything. When the vision of the Grail turns out to be an illusion, what's wrong with replacing it with a bottom line? One of my colleagues said recently that "it looks as though medicine is about to join the real world."

If so, we agreed that whatever esteem medicine had earned came from the "unreal" world we were about to leave, where some principles were better than others, and even the unprincipled knew the difference; where those who were troubled, in pain, sick, and helpless could expect to be cared for by men and women whose single-minded aim was "to cure sometimes, to relieve often, to comfort always."

The principle that making money should never come ahead of that obligation is so ancient as to need no defense, yet it is that principle that is under fire. No one pretends that all physicians have always been faithful, but most have acknowledged the principle, and their patients have counted on it.

"No one should approach the temple of science with the soul of a money changer," wrote Sir Thomas Browne in the 17th century. Paracelsus in the century before condemned the practitioner who worked "not out of love for the patient, which should be the physician's first virtue, but for the sake of money. Where money is the goal, envy and hatred, pride and conceit, are sure to appear. ..."

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A Half Century of Progress (1936–1986)

Reflections on Medicine … Conn Med 1986; 50:9

ROBERT U. MASSEY, M.D

WHEN does journalism stop and history begin? Last month, last year, before Watergate, or World War II? Or is history only a literary restoration of that past which precedes living memory?

The history of medicine always seemed to start with Hippocrates, but even he, or a contemporary, had written a work called *Ancient Medicine,* not exactly an historical piece, but one which presupposed that our art even then (420–430 B.C.?) was old, as surely it was.

Yet modern medicine, the medicine with which we are familiar, dates back to Robert Koch and anthrax in 1876, or maybe W.G.T. Morton and ether on October 16, 1846, or perhaps William Harvey and *De motu cordis* in 1628. Whose favorite legend or hero begins our era? Koch, Pasteur, and Lister probably come closest. Few would deny, however, that the exponential growth of medicine as the newest science is little more than a century old; if that is granted, then *Connecticut Medicine* has been witness to half of it.

1936 was a felicitous year to begin a journal. The darkest days of the Great Depression were over; the horrors of the Holocaust and the destruction of World War II were foreseen by some, but mercifully or unfortunately, invisible to most. The optimism of the Progressive Era yet lingered and with it the faith that democracy, science, good will, and hard work would continue to improve the human condition.

Medical progress was an undeniable symbol of that cheerful hope; those of us old enough to remember those days believe we can recall that good feeling. Perhaps, but we need always to be on guard: our memories protect us by being more selective than we know; almost any 50-year stretch of time looks golden at its beginning. Maybe that is why there has always been a Golden Age from which, our old men tell us, we have declined, and why myths of the beginning almost always describe a place like Eden.

But look! Sulfanilamide (Prontosil) was first used at the Bridgeport Hospital (reprinted in this number) in December, 1936. Dr. Daniel C. Patterson, President of the Connecticut State Medical Society, reported eight cases in detail, but told of being "favorably impressed" by results in over one hundred; then he lets down his scientific reserve: "Its action in some cases has been most spectacular, and seemed alone responsible for saving the patients' lives."

I recall reading the account of this new drug in the medicine section of *Time,* then asking for some additional information about sulfanilamide from our family doctor. I used it all for a report in my high school English composition class and got an A +! I too had written with some feeling; one of my friends had died the year before from "blood poisoning" which followed a minor injury. "Death can enter through a pinprick," I remember hearing. A neighbor's eight-year-old daughter had died several years before from "spinal meningitis," and I recalled a classmate in the fourth grade who never returned, and we were told later it had been spinal meningitis. When I was ten years old I had been treated for lobar pneumonia by our homeopathic physician (who had only lukewarm homeopathic convictions, I came later to know) with very dilute potassium iodide. When my parents asked about the outcome, his response was, "You know how pneumonia is."

Suddenly having the means, or the almost certain hope, of controlling bacterial infections changed not only medicine but world history. As in all technologic advances there were losses and gains; stopping pneumonia in its tracks when life should be coming to a close is often no boon; maybe our enemies planned their World War II campaigns more recklessly knowing that sulfonamides and later penicillin were available. Our campaign in New Guinea and the Solomons was successful in part because of sulfaquanidine. And of course there is the population problem.

But only physicians who live their lives one patient at a time can know that saving a young life threatened by streptococcal or meningococcal disease is the very best thing in the world to do. The polyglot crowd who are trying to "cut medicine down to its size" and who ask "why those doctors think they are different from everyone else" cannot match that one. Do they know that we have only started?

We need to be careful; it is easy for physicians to fall into the mortal sin of *superbia,* and our arrogance has not always gone unobserved. But after so much talk of doom and crepe hanging recently, a little horn blowing on the occasion of a Golden Jubilee may be forgiven, even by our tiresome detractors, who, like the poor, are always with us.

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In Praise of Being Amateur

Reflections on Medicine ... Conn Med 1987; 51:2

ROBERT U. MASSEY, M.D

"OBVIOUSLY the amateur will only indulge in so seemingly desiccated a pursuit if he enjoys it, and in the end no further justification need really be demanded."[1] Sir Geoffrey Keynes was writing of his passion for bibliography, only one of his several pursuits, but what he had to say about playfulness in scholarship implied a gentle censure of some of the darker aspects of professionalism.

I first learned about Geoffrey Keynes, M.D., F.R C S., over 50 years ago; he had edited and written the introduction to an edition of Sir Thomas Browne's *Religio Medici* which my father had in his library, and which I was reading, along with a number of other books about doctors, during an early romantic encounter with medicine.

Years later I read his excellent biography of William Harvey in preparation for a talk on the author of *De Motu Cordis,* and discovered in addition his *Portraiture of William Harvey* from which I made some slides. At some time in the past ten years I came to realize that Sir Geoffrey Keynes was the younger brother of John Maynard Keynes of Keynesian economics fame. His final book, *The Gates of Memory,* was published in 1982, only a year before his death at the age of ninety-five. This delightful autobiography which reaches back from our decade into Victorian times celebrates a surgeon's life. but more especially the joys of amateur status, for Keynes was bibliographer, biographer, medical historian, art collector, wood worker, and *litterateur.* Nonetheless, until the end of his seventh decade he was first of all a surgeon: "Though my friends had often thought that literature and bibliography were my first loves, in reality it had been the other way round. My most intense interest had been in the science and practice of surgery ..."[2]

His contributions to surgery were not inconsiderable. Following World War II, during which he had served in the R.A.F., first as Group Captain, later as Acting Air Vice-Marshall, he returned to his old hospital, St. Bartholomew's, as Senior Surgeon, he was a "man of Bart's'' as William Harvey had been over 300 years before.

During the First World War, as medical of officer in the R.A.M.C., he had pushed for the use of blood transfusions to reduce mortality from wounds, and had developed a drip-feed apparatus for controlling the rate of flow. The original work on the use of citrated blood had been an American development; Keynes learned it from a Harvard Medical School group in France in 1917. Shortly after the war his interest turned to the problem of breast cancer, and in 1922 he began to use radium needles, initially for those patients who were deemed inoperable, but later he abandoned entirely the radical Halsted approach: "From 1929 onward I was publicly advocating conservative treatment for carcinoma of the breast."[3] This involved him in many bitter controversies with his surgical colleagues, yet the 1982 edition of Garrison and Morton's *A Medical Bibliography,* lists his 1932 *British Journal of Surgery* article, "The radium treatment of carcinoma of the breast," among those texts which best illustrate the history of medicine.

While in the R.A.F. in 1942, he performed the first thymectomy in Great Britain for myasthenia gravis, following the lead of Alfred Blalock at Johns Hopkins in 1939. "By 1954 he had amassed the largest series of thymectomies in the world."[4] At the recommendation of the Royal College of Surgeons the Queen honored him with knighthood in 1955.

Nevertheless Keynes remains far better known to us for his amateur pursuits than for his work as a surgeon. Although more than once criticized by professional bibliographers for his "impure" scholarship and his rejection of some of the rules, he remained undaunted. "I preferred to give readers less pedantry and more humanity ..." and he added, "In the ensuing years my 'impure' productions have continued to be in demand."

Increasingly the work of scholarship demands the skill and dedication of professionals, but unfortunately for the rest of us, professional scholars talk and write largely for one another whom they often regard more as competitors than as colleagues; worse yet they become deadly serious and possessive about the diminishing area of intellectual activity which they have staked out for themselves. The amateur on the other hand is there for the fun of it; his scholarship, though serious, retains a playful quality which invites us to return again and again to the joy of learning, "and in the end no further justification need really he demanded."

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Speculating with Nature

Reflections on Medicine … Conn Med 1990; 54:2

ROBERT U. MASSEY, M.D

THE debate over cholesterol, diet, and heart disease that heated up after the publication of "The Cholesterol Myth" in *The Atlantic Monthly,* in September is another reminder that medical knowledge, like most things in this life, does not always carry the guaranteed certainty of a hard science. And physicists, the hardest of the hard scientists, are quite willing to admit that even their science gives them some trouble when reductionism reaches the level of quarks.

In medicine, quarks are hardly an issue, but molecular shape and charge are critical to our understanding of what happens on all those myriad surfaces on or in cells. Understanding at that level, however, does not often help to explain the relationship between eggs and heart attacks, or whether 65 year olds need to take notice. For the answers to questions like that, only Hippocratic, or perhaps Baconian, medicine will do: observe, record, count. The beginning of statistical medicine in the first half of the nineteenth century was truly the beginning of modern medicine, when we could begin to provide answers to questions about the efficacy of bleeding in erysipelas, or of handwashing for those attending on a delivery. Only after nature had been observed honestly and without prejudice was it possible to make up reasonable theories about how things happened and then test them in the laboratory. Once it was clear that Lister's methods made a difference in the incidence of postoperative wound infections, the next step was to look for the animalcules, or something like them, that simply had to be there. In Lister's words, "… if I were to put together the facts which I have had presented to me in surgical practice, proceeding on the antiseptic system, I should be able to present an array of evidence in favour of the Germ Theory as good and convincing as experiments performed in a laboratory."

Those clinicians who were so carefully observing and recording, measuring and counting, in those early nineteenth-century decades had caught the spring fever that Francis Bacon had hoped for more than 200 years earlier, a "secret initiation, which, like the coming of April or Spring, might avail to thaw and loosen your fixed and frozen minds." They were, to use another Baconian figure, putting Nature to the question.

But what is the question? At a lecture on the nature of memory some years ago in Hartford by the eminent neuroscientist, Sir John C. Eccles, a scientist in the audience approached him afterward with the comment, "Fascinating, Sir John, but you said nothing about *the* question!" For Eccles the important questions all had to do with the nature of consciousness, the human psyche, and the will. All his distinguished scientific work seems to have been informed, or drawn on, by this quest, and it was natural to have expected him to mention it. He had no hesitancy, however, in recognizing the allusion to *the* question.

Educators say we must look for promise in our students not by their ability to memorize but by their ability to solve problems. My dog does both very well, and after several million years of human evolution one might expect both critical qualities, remembering and problem solving, to be fairly well developed in our species as well. What seems to be unique to us is our remarkable ability, or the ability of some of us, to ask curious questions, some simple, some humorous, but some as profound as the cosmos itself. Asking questions has to do with wondering, and wondering flows from a sense of awe. For some whose materialism is less robust, awe may take on a numinous quality; there are examples throughout the literature of science.

How do we measure a sense of awe? I am convinced that those students who have it will be the brightest and best, and will become the finest doctors, the most splendid parents, the most inspiring teachers, and the best friends and citizens. But since we cannot measure awe and wonder, cannot even be sure about question-asking ability, that assertion remains unprovable. Perhaps it is better to leave this matter alone, not try to make a sense of wonder the subject of some standardized test. It is perhaps important that this quality should come only as a surprise, an inspiration, evoked by the game of hide-and-seek that Bacon saw mankind, to its glory, playing with nature and nature's God.

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Curiosity: An Aperitif

Reflections on Medicine … Conn Med 1990; 54:7

ROBERT U. MASSEY, M.D

BEFORE beginning a lecture or seminar in the history of medicine I feel an unpleasantness rising in the back of my neck. I have an inkling that most of the students are wondering why we waste their time in this way. So I stumble around with the question that my imagination has put into their heads: why bother about history? We have a CD-ROM in the library with the last five years of medical literature compressed onto it. Who needs more?

My answers, offered before they think to ask, vary, but generally include:

1. Curiosity, the same reason most of us would like to see Leningrad or poke around on the Martian desert.
2. To know ourselves better, especially our limits.
3. To understand the present better by giving it a third and maybe a fourth dimension.
4. And then I remind them that when we speak of dementia we first describe memory loss, and that tyrants are generally intent upon rewriting history, or eliminating it, which comes to the same thing.

It seems to me that teachers are apt to pay too little attention to curiosity: they would like us to have a higher, more intellectual, or at least practical reason to learn whatever it is they have been assigned to teach us. Most small mammals that I have had a chance to watch—dogs, cats, chipmunks, squirrels—are intensely curious, more interested in the world around them than they are even in food or sex; their lives would be shorter if they were not so inquisitive. Maybe our own native, burning curiosity has been dampened by living in a world that is too safe, and by having been told too often not to ask so many questions.

To medical students medicine is symbolized by its technology: the hypodermic needle, the stethoscope, the microscope, the ophthalmoscope (I recall my wonder at being able to see inside the eyeball!), the x-ray, and all the paraphernalia of surgery. The economics of health care, the sociology of disease, even medical biography are acquired tastes for most, but no one passes a display case filled with saws and amputation knives neatly packed in their felt-lined boxes without a shudder and a hundred questions.

Then to discover that not only our colonial forebears used these things, but even the Romans, the Greeks, and long before them the Egyptians and their eastern neighbors in the valley between the rivers, will fire the fertile imaginations of those just beginning to think about the application of steel to living flesh. "What did they do about pain?" What indeed! In Celsus' *De Medicina,* written before the New Testament, we read about how to repair an inguinal hernia:

> … and for the day before he must abstain from food: … he must lie on his back; next if the groin has to be cut into, and if the pubes is already covered with hair, this is to be shaved off beforehand: and then after stretching the scrotum, so that the skin of the groin is rendered tense, the cut is made below the abdominal cavity, where the membranes below are continuous with the abdominal wall. Now the laying open is to be done boldly (audacter), until the outer tunic … is cut through, and the middle tunic reached. When an incision has been made, an opening presents leading deeper. Into this the index finger of the left hand is introduced, in order that by the separation of the intervening little membranes the hernial sac may be freed.…

The account goes on in clear, simple Latin sentences, including instructions to take care "lest the abdominal membrane be injured and set up inflammation." There is an admonition to tie the blood vessels, leaving the threads to hang out of the wound, and finally, "Through the margins of the wound itself two pins (fibulae) are then passed, and over this an agglutinating dressing."[1]

Do they picture in their mind's eye this first-century craftsman, this *chirurgus,* slowly working his way through the confusing structures of the groin, repairing an inguinal hernia in a conscious patient, "with a strong and steady hand which never trembles, … filled with pity, so that he wishes to cure his patient, yet is not moved by his cries...."[2]

How much of Imperial Rome's GNP was spent on health care might interest some, but not a 22-year-old medical student! "Tell me, what did they do about the pain?"

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Euthanasia

Reflections on Medicine ... Conn Med 1991; 55:11

ROBERT U. MASSEY, M.D

I will neither give a deadly drug to anybody if asked for it, nor will I make a suggestion to this effect. Hippocratic Oath.

"Were I of Caesar's Religion, I should be of his desires, and wish rather to go off at one blow, than to be sawed in pieces by the grating torture of a disease," wrote Thomas Browne, who, but a few lines before had written, " ... but where life is more terrible than death, it is then the truest valour to try to live." And later, "He forgets that he can die who complains of misery; we are in the power of no calamity while death is in our own."[1]

The religious denunciation of suicide is not exclusively Judeo-Christian. The Pythagorean origin of much of the Oath has been argued by Ludwig Edelstein, especially the rules concerning abortion, suicide, and the giving of a deadly drug.[2] In *Phaedo* Plato quoted Socrates:

> There is a doctrine whispered in secret that man is a prisoner who has no right to open the door and run away: this is a great mystery which I do not quite understand. Yet I too believe that the gods are our guardians, and that we men are a possession of theirs.... Then if we look at the matter thus, there may be reason in saying that a man should wait, and not take his own life until God summons him....[3]

St. Augustine left no doubt that in his view suicide was the worst of crimes. The mind of Christendom seemed to agree, for suicides were denied burial in hallowed ground; to make an example of them, they were often buried at the crossroads with a stake driven through their hearts. Our aversion to suicide runs deep, and as physicians we have been taught to regard it not as a rational act, but as the preventable outcome of a serious disease.

In November the citizens of Washington voted on a referendum that would permit physicians to do what the Oath condemns. Of course, there would be requirements that would have to be met to safeguard against any kind of indiscriminate use or misuse of this new power. Anyway, the rules in a 2,000-year-old pagan oath whose origins are obscure, and that has already been broached in the matter of abortion must only be binding in a kind of traditional or ceremonial way. Furthermore, Jack Kevorkian has discovered that in Michigan there is no law against assisting in suicide.

When I have spoken with students and house staff about this matter, they, like Thomas Browne, have been of several minds: suicide may at times be rational, it always signifies depression, it is cowardly, it is against religion, perhaps a crime; but on one point they have been unanimous: doctors must not be given the power to take life. It is not because there may not be times when it would be merciful to accede to a patient's request, but that given a hundred such cases, we should never agree. In one way or another these young physicians felt the reality of a slippery slope, the ease with which the first offense against a deeply held tabu or conviction can be repeated, and then again and again, each time with less revulsion. It was deliberate killing they had in mind, not the giving of morphine to relieve intractable pain, even though death might be hastened. It was giving a lethal drug such as potassium chloride that could have no other effect than to stop the heart, or an overdose of a hypnotic drug far beyond that needed to control anxiety or pain, that would be inexcusable; in these instances no physician could plead "unintended effect."

In 1826 a medical student wrote his thesis, "Medical Euthanasia," by which he did not mean what is now meant by that term; *euthanasia* is a euphemism like "putting to sleep," or in the Washington terminology, "aid in dying." Its actual meaning is simply "a good death," and it was the student's assertion that the physician had an obligation to assure an *euthanasia* for his patient, "... and least of all should he be permitted, prompted either by other people's requests or by his own sense of mercy, to end the patient's pitiful condition by purposely and deliberately hastening death."[4]

Nothing has occurred in 165 years since that medical student from Goettingen wrote his thesis that should prompt us to call him outdated,

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The 21st Century Has Already Begun!

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ROBERT U. MASSEY, M.D

MOST of the 200 years of the Connecticut State Medical Society lie within the "long" 19th-century, a historical epoch, that ended on 28 June 1914 with the assassination of the archduke Franz Ferdinand in Sarajevo or perhaps a few months later when at 7:30 A.M. on 1 August the German 16th Division invaded neutral Luxembourg at the little village of Trois Vierges. The century had been born 125 years earlier in the tempest of the French Revolution; we Americans might insist that 1776 was its natal year, but our Revolution, far removed from the center of great events, was an 18th-century affair, closer to the Enlightenment than to the radical empiricism and romanticism that followed a decade or so later. Our Constitution is a model of 18th-century rationalism; it is hard to imagine its restrained and parsimonious language appearing in a document from, say, the populist 1840s.

During this long century, 1789–1914, the ideals and beliefs of Americans and Europeans remained, if not constant, at least coherent: novels written at the beginning were still popular at the end; music written in the 1790s would still be attracting large audiences in 1910. The science of medicine made its greatest advances during this century, moving from a time when medical students still read the works of Hippocrates to the eve of World War I when Alexis Carrel of the Rockefeller Institute addressed the Hartford County Medical Association on his work in maintaining the life of tissues and organs *in vitro*.

The lives of Pierre Louis (1787–1872), Oliver Wendell Holmes (1809–94), and William Osler (1849–1919) overlapped and spanned this period. Holmes was taught by one and influenced the other; they spoke a common language, the new language of medicine and medical science that would not sound strange today in a modern American or European hospital. The medicine of 1914 was essentially modern medicine, the medicine we know; its values and certainties were those of the 19th century. Those of us who entered medicine around the time of World War II had parents born in the 19th century and were taught by men and women whose early lives were formed in that century. And now we have lived to see the end of the 20th century!

The century that followed the long 19th seems to me to have been a short one. It began in 1914, was the bloodiest of all centuries, marked by wars and rumors of wars, economic depression, environrmental destruction, and individual and social disintegration, and it ended in 1991 with the collapse of totalitarian communism. Those of us with our feet planted, much of the time at least, in the century of our heroes in science, medicine, literature, music, and art find that being catapulted through a second century and into a third, the new 21st century, is disturbing, unpleasant, and disorganizing. Lewis Thomas thought we might be safe if only we could get out of the 20th century alive. It appears that we have made it, except for the poor souls in Sarajevo where it all started in the first place: "Some damned foolish thing in the Balkans," Bismarck had predicted. The course of events is often surprising, and history never repeats, but there are patterns.

During the long 19th century, with its industrial revolution, our own Civil War, the new geology, Darwinism and the loss of biblical certainties, there were profound changes; the speed at which information traveled advanced from the pace of a horse or sailing packet to the speed of light, yet the norms of social discourse and morality seemed eternal. To be sure these were under occasional attack from the intellectuals; they always have been, but they have generally held,. and society felt secure and mostly satisfied with itself. Reformers sought to improve the world, but they appealed to standards that most men and women accepted, framed in language that all understood. The "thou shalts" and "thou shalt nots" were rarely in question.

These 19th-century guides, derived from an ancient past, are rapidly disappearing, not only because of the inevitable loss of historic memory, and of 19th-century people, but because in this pluralistic society all values have taken on equal worth or worthlessness, and one's received or inherited wisdom turns out to be an offense to one's neighbor. The task of the 21st century is to rediscover the social fabric, the *tao,* that, I suspect, has not really been lost at all but is hard-wired somewhere within the confines of our dura mater. For physicians our task is to rediscover the joy, even the glory, of medicine in a brave, but more often absurd, new world!

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Steering Toward a Tame Death

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ROBERT U. MASSEY, M.D.

WHEN Daniel Callahan's book, *Setting Limits* was published several years ago, one of my geriatrician friends wondered aloud "how could Dan have written something like that?" American geriatrics was a young specialty then and the need to set aging apart from disease and death was keenly felt by its practitioners. "Successful aging" was the goal, and indeed the time had come to shake off our ancient prejudices that to be old was to be ignored, sick, demented, and dying.

Yet the old awareness that life has an ending will not be denied, and even if the technology of medicine refuses to accept the ways of nature, we should know when the time comes to cry "enough." It is not only modern medicine but our own vain hope, reinforced by our faith in science, that death may be postponed almost indefinitely that gives us our wild appetite for what Callahan calls our technological brinkmanship. If we can eliminate small pox, transplant hearts, use the power in an atom's nucleus, and send amazing machines all over the solar system, surely we can solve the death problem.

In his most recent book, *The Troubled Dream of Life: Living with Mortality,*[1] Callahan raises grave concerns about how we express our commitment to the sanctity of life and the directions we have taken, both as a society and as a healing profession. In our lurching forward we have forgotten our limits and thrown away the chances of a "tame death." His is a sobering meditation on mortality, recalling Montaigne's essay, "That to study philosophy is to learn to die."

Our times are especially impoverished, having left behind much of the philosophical and religious support that sustained our pretechnological, pre-Enlightenment forebears. The result is that too many may be destined for a "wild" death. Those of us who have worked in intensive care units and engaged in futile efforts at cardiopulmonary resuscitation know the forms these "wild" deaths may take. We have seen how we may, in Callahan's words, "increase the degree and duration of sickness,… and then—as a final touch—render invisible the borderline between a living person and a biologically functioning body." He writes:

> The various changes together can be summed up as follows:
>
> - longer lives and worse health
> - longer illnesses and slower deaths
> - longer aging and increased dementia.

Even though we have been encouraging our patients to write living wills, to consider hospice care, to recognize that postponing death now may invite a worse death later, things, in Callahan's view, are getting worse: 'older and sicker' is the trend." All disease is potentially curable, surely soon we will find the "reaper" gene and turn it off!

Callahan suggests meanwhile five stages for treatment termination for a potentially lethal disease:

> *Stage 1.*—A refusal to respond to all health threats, even to seek diagnosis …; palliative relief of symptoms only.
>
> *Stage 2.*—A refusal to go beyond diagnosis …; palliative relief of symptoms only.
>
> *Stage 3.*—A refusal to accept any medical treatment [beyond palliation] that does not promise high probability of success and a minimum of unpleasant side-effects.
>
> *Stage 4.*—A willingness to accept any medical treatment that offers even a low probability of a successful outcome.
>
> *Stage 5.*—A willingness to accept any medical treatment with even the remotest possibility of success.

With the selection of Stage 4 the "danger here is evident; as we approach technological brinkmanship, the dangers of a wild, poor death increase dramatically."

Men and women I have known who have elected to accept an earlier death rather than chance a wild death later have mostly done so on their own initiative. As physicians, our obligation surely is to guide patients to a peaceful death, honestly warning them of the dangers of technological brinkmanship.

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A Chance Now to Rediscover First Principles

Reflections on Medicine … Conn Med 1995; 59:2

ROBERT U. MASSEY, M.D.

ONE of the things you learn from history is never to take the present too seriously; the present, you find, doesn't last very long, it can never be a permanent condition. In fact, the past is the only reality we know; the present is gone before you know it, and the future, like the weather, is unpredictable, at least if you push out much beyond a week or so. In his wonderfully lucid book, *A Brief History of Time*, Stephen W. Hawking, writing of time's arrow, asks "why do we remember the past and not the future?"[1] Why does time seem to us to move in the direction that it does? He concludes that time's arrow follows the second law of thermodynamics, toward entropy, or disorder, and also outward in the direction of the expanding universe that began with the the Big Bang. History, "our psychological arrow of time," moves along that way too, and because one day is pretty much like the next, should not present us with discontinuities or surprises. But it does, perhaps, Hawking might say, because the universe is lumpy, not smooth, and that is all traceable to Werner Heisenberg's uncertainty principle.

Such big surprises as the reunification of Germany and the collapse of the Soviet Union were not supposed to happen in this century. Universal health insurance was to be here in 1973 during Richard Nixon's watch, just as it had come to Germany in 1883 when the conservatives were in power, during Bismarck's watch. When that failed to happen, its revival in 1993 was almost certain to succeed. We are too close to say why, in fact, it failed—we all have our opinions. But fearing a reform that might leave them out, and faced with declining profits in life insurance and investments, the insurance companies moved quickly to take over anyway. We have entered rapidly into an era of commercialized, for-profit, market-driven medicine, which, we hope, will be short-lived.

If it isn't, academic medical centers, as we know them, will be unrecognizable as medical schools, teaching and research institutions, joined with their teaching hospitals, integral parts of universities, institutions that have worked reasonably well as schools for doctors and discoverers of new knowledge. Now they are trying to figure ways to go along with the crowd; driven by health insurers, they seek to grab on to their share of the health-care market. In this they will both compete with and try to join the teaching hospitals whose concern for patient care and education will run a distant second to their compelling need to hold their market share by cost competing.

Thus we have health-care reform without Congress having considered a bill. Perhaps it was all inevitable (thoroughgoing determinists would say so, of course) because teaching hospitals and academic medical centers had, like government and dinosaurs, grown too big. Unrestrained by the market and common sense, that was sure to happen. Major hospitals with 60% occupancy, or even less, academic medical centers with more faculty members than students and still growing, and massive administrative hypertrophy in both, if not quite ready to become black holes, are certainly ripe for significant shrinking. The future being unpredictable in a lumpy universe, this all may come sooner than any of the insiders can imagine! We can only hope that they discover soon that they never needed insurance companies in the first place to manage their money and run the show!

To show how quickly this has all come about, the Institute of Medicine about 25 years ago suggested, after an elaborate study, that a medical school with 100 students in each class would need fewer than 100 faculty members, including their academic administrators. Of course, it is not quite that simple, but when medical schools engage full-time faculty to do nothing but clinical work—no teaching or research—and then expect busy practitioners not reimbursed by the school to teach their students, priorities have gone astray. When that happens, stormy change should not be long in coming. And when insurance companies talk of buying doctors and patients, the rumble of distant thunder is unmistakable.

Change can be and often is for the worse; it will be in this case unless we rediscover some defining principles: physicians are not health-care providers, patients are not consumers of health care, medical services are not products, and the work of physicians and other professionals and their hospitals is not the health-care industry. Words have a way of determining the direction of thought's arrow.

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Should the Words *Sin* and *Shame* Be Revived?

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ROBERT U. MASSEY, M.D.

> Use everyman after his just desert, and who should 'scape a whipping?
>
> Shakespeare: *Hamlet, Act II, Sc. 2.*

WHEN my classmates and I were introduced in earnest to Greek mythology in the seventh grade, our teacher told us quite seriously that the Greeks had no idea of sin; our teacher, caught up in the progressivism of the time, of course, was wrong. The Greek word *hamartia* signified not only failure, missing the mark, but a wrong act, a sin against a divine commandment.

Several years ago some nurses and I were watching a video dealing with medical ethics; in it the surgeon-general C. Everett Koop acted out an encounter with a teenager who had come to him for a contraceptive prescription. He listened patiently to her request, asked if she had thought it through carefully, and urged her to return after office hours so he could talk with her about a better way. The nurses were offended that he had even implied that her request was inappropriate, and further that he would try to impose his values on her, perhaps, heaven forbid, making her feel ashamed!

In 1973 Karl Menninger wrote a book that enjoyed moderate popularity, *Whatever Became of Sin?*[1] He observed that the last American president to mention sin publicly was Dwight Eisenhower when he proclaimed a national day of prayer in 1953; he borrowed his prayer from Abraham Lincoln's prayer of 1863:

> It is the duty of nations as well as of men to own their dependence upon the overruling power of God, to confess their sins and transgressions in humble sorrow, yet with assured hope that genuine repentance will lead to mercy and pardon.

"So as a nation," wrote Menninger, "we officially ceased sinning some twenty [now forty] years ago." Crimes, of course, remained; some sins turned into crimes, others into medical problems, but with these transformations, shame pretty much disappeared, and guilt feelings became pathological. The demise of sin coincided closely with the sexual revolution. There is no denying that those of us who were adolescents in the 1930s defined sin mostly as failure to live up to fairly rigid standards of sexual morality. Our parents and teachers had been middle-class Victorians and Edwardians for whom their Roaring Twenties had been a delightful aberration, hardly to be taken seriously as a revolution, sexual or otherwise.

The dominant ethos then was middle-class morality, the very morality that the medical historian Oswei Temkin invoked to explain the decline of venereal disease beginning in the late 18th century. Bourgeois society, then coming into its own, saw syphilis as "a sign of the moral degeneracy of the single individual who has transgressed the laws of the moral world.... Disease [syphilis] was now forgiven no-one, whether aristocrat, bourgeois, or peasant. For one and all it spelled disgrace."[2]

As the detective-story writer Dorothy Sayers reminded us, *luxuria* or lust is but one of the seven deadly sins. I suspect it is a fair indicator, when it runs rampant, that the other six are out of their cages as well. A judge, reflecting on the failure of the liberalism that he had so long espoused, said that too many of our fellow citizens have lost their sense of responsibility and self-control. Adolescent sexual activity, now exceeding 50%, with its resulting increase in illegitimate births to teenage mothers is a judgment on irresponsible parents in a permissive culture.

Senator Daniel P. Moynahan, speaking of this epidemic, unique to our time, remarked recently that "We have learned how little we know and how much we have denied our failure." Only to mention this matter a few years ago was to be scorned at best as an outmoded moralist, and at worst, a racist.

Shame is the only reliable corrective. Social engineering and making laws may reinforce, but they do not cause responsible behavior. Moral renewal is not something that job training and eliminating poverty can guarantee. A society in which shame and guilt have become feelings to be ashamed of is a society in steep decline. "I have pursued the possible usefulness," wrote Dr. Menninger, "of reviving the use of the word 'sin'—not for the word's sake but for the reintroduction of the concept of guilt and moral responsibility."

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Health-Care Ethics: Whence Come the Basics?

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ROBERT U. MASSEY, M.D.

AFTER the ethics committee members had read through the first case report at their quarterly meeting, it was clear from their earliest tentative remarks that major differences would divide the group during the rest of the meeting. The report itself even hinted at unresolved conflicts among the staff who had been involved with the case. As the hour drew to a close we had moved only a little toward a common understanding of the issues themselves, how to define them, what ethical matters were at stake, how now to proceed. In a secular culture like ours where there are no commonly acknowledged moral authorities, discussions of this kind often simply run down for want of energy and the will to pursue them further. One member suggested we devote the next meeting to getting back to basics. Unfortunately, like professional educators, we will hardly ever agree on the basics.

The reason, of course, is that ethics is plural. Twenty-five years ago our first German exchange student and I were, not surprisingly, talking about the 13 dreadful years of Nazi rule in his country. He wondered why so many of his parents' generation had been taken in by this diabolical regime. "We are, all of us," he said, "after all members of the same Judeo-Christian tradition." I think I reminded him that, in that sentence, tradition was a plural noun. Greek, Roman, North African, Jewish, Armenian, Celt, German, Slav—which Judeo-Christian tradition, and from what period and according to what authority?

One ethicist I know began his first lecture with the hardly original admonition: "Just always do the right thing." C.S. Lewis in his book, *The Abolition of Man,* writes of the *Tao,* the Way, by which he meant the Natural Law or Traditional Morality: "It is the sole source of all value judgments. If it is rejected, all value is rejected. If any value is retained, it is retained." This is not far from Lewis Thomas's notion, or hope, that altruism is an impulse that we share with other creatures, something inherited, carried in our genes. "Among the most intensely social species it is a commonplace event, part of any day's work, for one individual member to sacrifice his life in aid of the community."[1] C.S. Lewis would have called that impulse an instinct and declare that it therefore lacked the authority of Natural Law, which, he would say, we can discover by reason (assisted by grace?). The Enlightenment philosophers thought so too (leaving out grace). They believed that by reason, we could construct a universally acceptible foundation for all ethical decision making. Immanuel Kant began with his categorical imperative and his rule that one must not use persons as means to ends, certainly not without their permission. We have learned after more than 200 years that these Enlightenment philosophies, as sound and hopeful as they seem, possess little power to bind, unless they are written into constitutional law and carry the enforcing power of the state.

An increasingly smaller number still are governed by the mandates of a Supreme Lawgiver which, by reason of their Source, are not subject to question or debate. The laws that bind believers are given as revelation and are accepted by grace. Because their numbers grow smaller in today's society, we need such structures as ethics committees and such specialists as bioethicists to compel us to compromise. Only within the exclusive fellowship of their smaller community can the members of a religious group, true believers, resolve ethical questions with the certainty that each member will, or should, understand the issues and be bound by a consensus.

However, when these matters come before a group comprising believers, half-believers, and nonbelievers alike in the secular setting of a peaceable committee, absolutes are out and so, of course, is resort to compulsion; compromise is the only resolution possible. Such compromise is generally unsatisfying and lacks the moral authority that binds. But the meeting ends; the principles of bioethics are invoked: autonomy, beneficence, nonmaleficence, and justice; someone mentions the Oath; and another reminds the group, most of whom by now have grown a little in moral reasoning, that there are rarely right or wrong answers, so we should not be downcast.

"That conclusion," wrote Paul Ramsey, "I regret, since medical ethics worked better when moral consensus was intact and there was less need for ethical reflection and analysis."[2]

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The Passing of Sunday Peace

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ROBERT U. MASSEY, M.D.

> Six days shalt thou labor and do all thy work: But the seventh is the Sabbath of the LORD thy God: *in it* thou shalt not do any work,...
>
> (Exodus xx: 9, 10.)
>
> It being contrary to the law and disagreeable to the People of this State (Connecticut) to travel on the Sabbath day—and my horses, after passing through such intolerable roads, wanting rest, I stayed at Perkin's tavern....
>
> (The Diary of George Washington, 8 November 1789.)

IN these latter days of the 20th century, an obligatory day of rest, like so many other ancient and beneficent customs, has faded from common memory. Growing up in Detroit, in a family that prided itself on its modern ideas, even going so far as to discuss Darwin at Sunday dinner to shock my fundamentalist aunt, I was never allowed to forget that Sunday was the Sabbath. No movies, no card playing, and no unnecessary work. We knew some Seventh Day Adventists who cut their grass on Sunday, and I might walk to a nearby delicatessen for cold cuts and rye bread for Sunday supper. But on that day I never had to mow the lawn or dig dandelions or put up the storm windows. Even homework was discouraged: "Surely you could have done that yesterday or Friday!" Assigned reading was not really work.

Sunday afternoon was for driving into the country or to Belle Isle or taking the ferry to Bob-Lo. No stores were open, except Sanders' Ice Cream where you could get a sundae, a dish they had invented for the after church crowd on Sunday! If the day was rainy, we listened to the radio, light classical music usually, and my father and I played chess, but never a card game. In the evening we all sat in the study and listened to the Ford Sunday Evening Hour, Jack Benny, and George Allen. Or my mother played the piano and we sang from some book called "Favorite Tunes." Sunday felt different from the other six days, entirely separate, and the city too had a peaceable look.

The Jews and later the Christians introduced the Mediterranean world to the rule of one day of rest out of seven, for everyone, even slaves. For the Jews it was *shabbat*, for the Christians, the Lord's day. After the conversion of the Roman Empire, Constantine in 321 A.D. declared Sunday a day of rest, a decree later repeated in the Code of Justinian. For the Jews the origin of *shabbat* observance is lost in antiquity, but was formalized after the Exile. Few institutions have relieved the lot of humankind more than this one, condemned, or blessed, as we are to labor for our daily bread. In an agrarian society it was a blessing to feel good about not working on this one day in seven. Sabbath signified that there was more to life than work.

Something of the Sabbath peace prevailed even in hospitals. As a house officer I recall the relief that followed the Saturday discharges, the sense of time stretching out until Sunday evening when admissions would begin to pile in. Sunday mornings were quiet, rounds later and leisurely, time to catch up on charts, time to spend with patients, time to read the *New England Journal,* bring your wife in for Sunday dinner in the residents' dining room, or just take a nap. Hospital weekends still are slower, but, I suspect, not for long. Our new masters, the HMOs and insurance giants, will see to that. Pausing, even a little, for a Sabbath rest cuts into profits.

The retail world has shown how profitable it is to keep going seven days a week, sometimes 24 hours a day. Both parents, or the only parent, may be working on the one day the children are at home, or if they are not working, they are out shopping or pursuing some solitary recreation. Seeing the full parking lots in the mall on Sundays, the crowds wandering to and fro seduced into buying and spending in these unlovely places, evokes a longing for that old, occasionally tedious, day of rest, a day with family, recurring every seven days and sustained by convention, or religion, and sometimes even by law.

The Blue Laws have had a bad press, and politically their return is unlikely, probably unconstitutional. Perhaps they could be reintroduced as a public health measure! Millennia ago the Sabbath had been made for man, but man and the Sabbath have been remade in our enlightened times to serve mammon. The decline of Sabbath observance is further evidence that progress is a myth, and that all we experience is change, as often for the worse as for the better, maybe more often!

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Doctor Stories

Reflections on Medicine ... Conn Med 1997; 61:1

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FOUR or five decades ago when my colleagues and I were thirty-somethings, new members in a growing group practice, our Saturday parties generally fell into a predictable pattern; after the first drink we left our wives in the living room talking about the kids and drifted into the kitchen where the liquor was plentiful, and told doctor stories until the small hours. "Don't you guys ever talk about anything but medicine?"

"What else is there?" we might have said, but didn't. The truth was that we never could resist the temptation. No one mentioned politics, the weather, baseball, or religion—just medicine of the "I had a patient" kind.

In those days I was seldom home for dinner before seven o'clock; my wife accused me of just not being able to leave the hospital. She recited the line from*Wind in the Willows:* "Believe me, my young friend, there is nothing—absolutely nothing—half so much worth doing as simply messing about in boats." Only she said "hospitals," and I had to agree. Some of the hospital time was taken up by doctor talk also, but qualitatively different from the more imaginative 1:30 A.M. kitchen talk.

In the dedication to his book, *The Human Body*, (1927) Logan Clendening recalls to an old friend, Peter Thomas Bohan, how "we have shown one another many pathological specimens, ensconced temporarily to the horror of our respective wives, in our respective bathtubs, and we have sat over many a mug of grog far into many nights discussing battle, murder, and sudden death." He hopes "that we may both long be preserved to indulge these relatively innocent pastimes, ..."

Forty or fifty years ago books of doctor stories, mostly autobiographical, enjoyed a considerable popularity: Arthur Hertzler's *The Horse and Buggy Doctor* (1938), Gordon Seagrave's *Burma Surgeon* (1943), Walter Alvarez's *Nervousness, Indigestion, and Pain* (1943), and later, *Incurable Physician* (1963), and more recently, Lewis Thomas's *The Youngest Science: Notes of a Biology Watcher,* (1983) and Francis D. Moore's *A Miracle and a Privilege* (1995). As medicine became less clinical and more reductionist after World War II, I suspect that much of the popularity of this genre among nonmedical readers began to wane. Even for doctors calcium channels seemed less appealing than real hearts in real patients!

The Lost Art of Healing, by Bernard Lown, M.D., (Houghton Mifflin, 1996) is one the most recent doctor books, and should have a good sale. He writes of the older clincal era of first-half 20th-century medicine, while telling of the remarkable advances in cardiology after 1950. The narrative is sustained by wonderful doctor stories of the "I had a patient" kind. Dr Lown and his mentor, Samuel A. Levine, M.D., are the chief personae, who demonstrate over and over the diagnostic and healing power of the history and physical examination, of the time spent with the patient, listening, touching, understanding, and making friends. I am saddened when I hear students in our introductory clerkships being told to take "focused" histories and do limited physical examinations based on the chief complaint. Those of Dr. Lown's and my generation long ago learned that the chief complaint is only the ticket for admission; it takes thoughtful, sympathetic listening and questioning to uncover the answer to our question, "What brings you in to see me today?" After a careful history and thorough examination, we should have the answer; a few tests should confirm the diagnosis. Lown makes short work of the excuse that a battery of blood tests, x-ray examinations, imaging, catheterizations are just smart, defensive medicine; rather they offer false promises of certainty; more than that, they are lucrative, and sometimes dangerous. An example is the indiscriminate use of the Swan-Ganz catheter.

> I return to my central thesis. Our health care system is breaking down because the medical profession has been shifting its focus away from healing, which begins with listening to the patient. The reasons for this shift include a romance with mindless technology, which is embraced in large measure as a means for maximizing income (pp. 156-7).

His doctor stories are best of all. Some stretch credulity, as when Dr. Levine diagnosed a developing massive anterior myocardial infarct by laying the palm of his hand over the precordium. Not only his sense of touch, but all of his other clinical senses were at work as well! Anyway, when we tell stories, especially stories about ourselves, some refining and altering is always called for. The poet Andrew Hudgins was right: "... autobiography dances on the shifting middle ground between fact and fiction, reportage and imagination, actuality and art...."

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The Undiscovered Country

Reflections on Medicine … Conn Med 1997; 61:2

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IN conversations with residents and geriatric fellows, the matter of end-of-life decision making, living wills, and durable power of attorney is certain to come up, as it should. Always they feel an uneasiness, not so much about death, but rather how to talk about it with patients. Understandable because most of these young physicians have never actually seen someone die, never witnessed the hours and minutes before death, never talked at length with patients, young or old, who know their disease is fatal and that they are dying. Many 30-year olds, in fact, have four living grandparents, or if one has died, that death took place in Florida or Iowa, miles away. Death is like Timbuktu; they know it exists but they've never been there.

As a matter of fact, talking with the dying about death is something few of us have done; so how are we to talk with healthy patients about their desires at the end of life? As professionals, can we tell them much more than they already know about this experience that we all will one day face, how it is likely to happen, what will be done to them when they are helpless, and where? That most of us want this kind of information was dramatically demonstrated by the great popularity of Dr. Sherwin Nuland's best seller, *How We Die.*

The first physician to attempt a study of this matter, using Pierre Louis's "Numerical System," was William Osler. He wrote of his study, done in the Johns Hopkins Hospital, recounting his findings in his Ingersoll lecture, *Science and Immortality*, in 1904:

> I have careful records of about five hundred deathbeds, studied particularly with reference to the modes of death and sensations of the dying. The latter alone concerns us here. Ninety suffered bodily pain or distress of one sort or another, eleven showed apprehension, two positive terror, one expressed spiritual exaltation, one bitter remorse. The great majority gave no sign one way or the other; like their birth, their death was a sleep and a forgetting. The Preacher was right: in this matter man hath no preëminence over the beast,—as the one dieth so dieth the other.

Surprisingly only four or five other studies of this kind have been done since, the most recent being by Joan Lynn et al that appeared in *Annals of Internal Medicine* last month (15 January 1997: 126: 97-106). This study involved 9,105 seriously ill patients in five teaching hospitals of whom 4,124 died. In the last three days, 55% were conscious, 40% had severe pain, and 63% "had difficulty tolerating physical or emotional symptoms." Twenty-five percent had a ventilator, 40% a feeding tube. Over half had indicated a desire for comfort care, and 10% were treated contrary to their preferences. The authors conclude with a carefully worded comment:

> It is likely that quality of care at the end of life will have to be routinely measured and that the public and other health care purchasers will have to demand and pay for adequate performance before lasting and sustained improvements are possible (p.105).

Arthur W. Feinberg in an editorial in this same issue suggests separate hospital units for dying patients (Hospice units?), or "keep the dying patient out of the high-technology milieu of the hospital," and he notes that "Our society has not yet accepted the inevitability of death."

I would suggest that we had a better time of it in 1904 than now; from my discussions with Hospice nurses I know that pain and distress, physical, mental, and spiritual, can be controlled over 90% of the time by skillful, intelligent, and empathic care, even beating Osler's experience of 75% whose "death was a sleep and a forgetting," not the wild death in the ICU!

Dr. Bernard Lown in his recent book *The Lost Art of Healing* (Houghton Mifflin, New York, 1996) wastes no words:

> Reflecting on a life of dealing with death and dying, I am persuaded that death's anguish is, in no small measure, man made. It is a product of Western culture, which denies death its due and foolishly allocates mammoth resources to prolong the tormenting act of dying.... But it is difficult to see any change.... the economics of dying are too great, and doctors too deeply fixated on proving their power over death, for the system to yield....
>
> Any meliorization of the problem has to face up to the fact that the contempory hospital functions best when the patients are infantilized and disempowered.... hospitals [must be] decoupled from the act of dying (pp. 288-9).

Rather than demanding that we fix this "unintended effect" of our good intentions, half of our patients are now asking us to become their willing executioners to save them from a demeaning fate far worse than death! What a shame!

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Reliability, Responsibility, and Trust

Reflections on Medicine … Conn Med 1997; 61:4

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OVER 20 years ago in a talk to medical school faculty and students, Dr. Larry Weed, the originator of the problem-based record, made a comment that stuck: "The physician who is 99% reliable is totally unreliable." One of those counsels of perfection, unrealistic, but worth aiming for. Weed was pushing for problem-based records, stored in a computer's memory, more reliable by far than the tangle of neurons in our heads, or the illegible squiggles in a patient's record that sometimes cannot even be found.

Reliability, responsibility, and trustworthiness are overlapping virtues that are too frequently overlooked in discussions of medical ethics; I suppose that in the tetrad of autonomy, beneficence, nonmalificence, and justice they are most closely related to beneficence. The computer is mostly reliable without being responsible; it may even be considered trustworthy—Weed was probably right in this regard; a good computer is more reliable and trustworthy than we are; without free will it cannot be otherwise unless it's broken.

Responsibility is a different matter. But to whom are we, especially we physicians, responsible? Insurance worthies and their stockholders? Hospital administrators? Our colleagues? Patients? Their families? Our families? Our neighbors? Or all of the above?

> Which now of these three, thinkest thou, was neighbour unto him that fell among thieves? And he said, He that showed mercy on him. Then said Jesus unto him, Go, and do thou likewise (Luke 10:36-37).

Is this a kind of counsel of perfection, ideal but quite impossible? In a review of Jacques Derrida's *The Gift of Death,* Andrew J. Mckenna writes:

> … Derrida ponders the implications of responsibility. If we are responsible for others at all, it turns out that we are responsible for all and for everything. Our responsibility toward others, all others and any particular other, is so total as to be utterly impracticable and psychically unbearable.

Does this signify then that the only practical relation between patient and physician is a contractual one in which the moral notions of reliability, responsibility, and trust are set aside because they are impossible anyway? Edmund D. Pellegrino and David C. Thomasma in their book, *The Virtues in Medical Practice* (Oxford University Press, 1993), call this the "ethos and ethics of distrust" and assert that it dominates medical practice in the late 20th century:

> In the last two or three decades, these perennial sources of distrust have been reinforced and expanded [both] within and outside medicine—the commercialization of medical care by advertising and entrepreneurialism; the excessive income and free-spending lifestyle of some physicians; the bottom-line, marketplace, "pay-before-we-treat" policies of hospitals and some doctors; the depersonalization of large group prepayment practices; physicians' growing preference for 9 to 5 jobs and time off; the retreat from general to specialty practice; the early retirements. The list is long and growing daily (p.71).

Younger physicians and house officers with whom I've discussed these matters, this decline of medicine into the business ethos of distrust and contract, tell me that it is the antithesis of what they expected when they entered our profession with its traditions of trust, responsibility, and, yes, even mercy. Too often, especially with younger patients of the boomer and Generation X crowd, they sense distrust and hostility toward them as physicians, and wonder how we are to find our way back out of the woods, or more aptly, the desert.

The way out of the total responsibility dilemma is simple: when confronted by a philosopher like Derrida, smile and remember William Osler's comment, "… I have never succeeded in mastering philosophy—'cheerfulness was always breaking in.'" And then more than once he (mis)quoted a line from Carlyle: "our main business is not to see what lies dimly at a distance, but to do what lies clearly at hand."

Our main business lies solely with the patient at hand: she trusts us to be devoted to her needs, to be competent, to be reliable, to maintain confidentiality, to be willing to spend time, and to be caring. She must trust that "her vulnerability will not be exploited for power, profit, prestige, or pleasure" (Pellegrino and Thomasma, p.68).

Recently some of our bioethicists have written of parting company with the older and perhaps outworn ideals of medicine, have talked of change in the rules of the game, have suggested that such things as trust and responsibility are not real, that the Hobbesian contract is the only reasonable way because we are all out to get one another anyway, that self-interest is all that drives our internal machinery. If they win the day, we may indeed be standing staring into the abyss!

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Tobacco: The End of the Affair?

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IN an English Lit class in high school, we read a series of essays, including many that will be familiar to members of my generation: Charles Lamb's "A Dissertation on Roast Pig," Ralph Waldo Emerson's "Self-Reliance," Mark Twain's "Saint Joan of Arc," William Allen White's "Mary White," Stephen Leacock's "Oxford as I See It," and many others, most of which now would be avoided for their grievous political incorrectness—if fact the whole book is a disgrace: all forty of the authors are dead Euro-American white males. Only the editor was a female.

One especially, I must confess, I recall with pleasure at odd times: Leacock's "Oxford as I See It" (1922). In it he has just declared that in his view, and for obscure reasons, Oxford is without doubt the greatest university in the world.

> I understand that the key to this mystery is found in the operations of the person called the tutor. It is from him, or rather with him, that the students learn all that they know; one and all are agreed on that. Yet it is a little odd to know just how he does it. "We go over to his rooms," said one student, "and he just lights a pipe and talks to us." "We sit round with him," said another, "and he simply smokes and goes over our exercises with us. From this and other evidence I gather that what an Oxford tutor does is to get a little group of students together and smoke at them. Men who have been systematically smoked at for four years turn into ripe scholars.... A well-smoked man speaks and writes English with a grace that can be acquired in no other way.
>
> ... If I were founding a university—and I say it with all the seriousness of which I am capable—I would found first a smoking room....

In the 1930s and '40s most of us were "smoked at" by professors in both medical schools and undergraduate colleges, but only the Rhodes scholars among us at Oxford. One of my favorite authors, C.S. Lewis, was an Oxford tutor; in the photo of him commonly seen his head is wrapped in a cloud of smoke. During the early years at the medical school in Farmington a great gray haze of tobacco smoke formed each morning over the heads of students and lecturers in both the first and second year lecture auditoriums. Only in the last decade or so has the air cleared.

Many years ago during a reception for him, a prominent visiting speaker, an academic physician and biomedical scientist who was also head of a large cancer center, was observed to be smoking unfiltered Camels, one after another. My wife, who knew him fairly well, said, "Dr.——, surely you know that cigarettes cause cancer!"

"Oh, no, June," he answered with a twinkle in his eye, "it's the filters, not the tobacco. Didn't you know?"

He died years later of a cause unrelated to smoking.

The only completely smoke-free places in those olden times were operating and delivery rooms, nurseries, schools, and naves of churches. Yet by 1950 the evidence was accumulating that smoking and lung cancer were very likely related. Annual deaths in England and Wales from lung cancer had risen from 612 in 1925 to 9,287 in 1949-50; only 0.3% were among nonsmokers. We all know the unassailable evidence that has accumulated since, and most of us who once smoked so long ago have given up that pleasurable and companionable habit. We make faces at the lingering smell of tobacco smoke in homes and clothes and cars; we demand smoke-free restaurants, airplanes, hotel rooms, hospitals, and medical schools, No one has smoked in our house for at least 15 years, even though by 1975, when my wife and I finally stopped, we had each smoked for some 35 years. Right now I know no one who smokes where she can be seen; two decades ago I knew few who didn't.

This is progress in a minor way. But recently it has become politically correct to be hysterical about tobacco. The FDA would like to take on nicotine regulation; perhaps alcohol would be next, then eggs, whole milk, and butter, and finally sodium chloride. And grown men and women are suing tobacco companies for the harm presumably caused them by their own fully informed habit of inhaling tobacco smoke. They ought to be suing their parents and the public schools for failing to instill in them the virtues of temperance, prudence, and wisdom, and maybe for over-smoking them when they were infants and children! Or else they should be quite willing, as we all should, to accept the consequences of their own free decisions.

One commentator, clearly never having heard of our amazing experience with prohibition in the 1920s and early 1930s, recommended banning the use of tobacco, phasing it out over 10 years. Government as behavioral

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counselor and petty moralist has generally seemed inappropriate to me.

The first act of Congress in our history, I am told, was to vote a tax on rum. Why not raise the tax on tobacco until there is a real effect on the market, say, a dollar or two on the pack, and forget the moralizing? It has worked where it has been tried. In the early days of the University of Connecticut Health Center, when the state's political masters were worried about how they could pay for these medical and dental students' education, I suggested to several legislators that they vote a 10 cent increase in the cigarette tax. I estimated that would raise over 35 million dollars a year, more than three times their annual allocation to the Health Center. They smiled and changed the subject.

Nothing is without consequences, and I understand the concerns of the leadership crowd for reelection, for the economic effects of encouraging buyers and their dollars to go out of state. I know they also are concerned for the future health of our children, especially when those children come to be 45 or 50 years old and begin to cough, and the little squamous-cell tumor starts its slow growth in one of their bronchi, or they keel over with a fatal arrhythmia right after lighting their 25th cigarette of the day.

But surely no one can escape having been informed of the risks of smoking tobacco or anything else, sexual promiscuity, alcohol, getting fat, eating globs of high cholesterol food, using too much salt, not wearing seat belts, sailing without life jackets, skiing, diving from high places, and leaving loaded guns in the tie drawer. The fault is not with Philip Morris, Heublein, egg and dairy farmers, and Colt. These may be, to use Aristotelian terms, the producers of the material causes of our discontents; they are not the efficient cause.

We have become a generation of victims, looking for someone or something to blame: not enough money or respect, abusive parents, a lousy neighborhood, genes, free radicals, insufficiently integrated schools, Madison Avenue, or the other political party. We appear to have forgotten notions of restraint, responsibility, and frugality. To be a victim in a society where the only virtue is tolerance for everything but tobacco smoke and *Huckleberry Finn* seems pathetic. But be of good cheer; these little episodes of hysterical behavior are what give color to the routine course of life. They are what make social history so much fun.

Meanwhile we undoubtedly have prevented some premature deaths, but I doubt the 300,000 plus we so confidently claim.

Dickens, Osler, and Mother Teresa

Reflections on Medicine ... Conn Med 1997; 61:10

ROBERT U. MASSEY, M.D.

WHAT, you ask, could these three have in common except that they were exceptionally good people? Charles Dickens was 37-years-old when William Osler was born, and had begun to write *David Copperfield* , and Osler was 61 when Mother Teresa was born, so for a time Osler could be said to have been a contemporary of each of the other two, although the overlapping years of their lives were miles and oceans apart. The Osler Library included a copy of a facsimile edition of the 1859 edition of *A Tale of Two Cities*, but the two men can hardly have met since Dickens died in 1870 when Osler was only 21 years old and still in Canada. Osler, I am sure, had a special interest in Mr. Cruncher, the resurrectionist, one of the unforgettables among many in that novel.

In *Bleak House* one of Dickens's minor characters, or caricatures, is Mrs. Jellyby whose morality is of the "telescopic philanthropy" kind, whose far-off gaze "could see nothing nearer than Africa." She worked night and day for the mission at Borrioboola-Gha, neglecting her numerous children, her poor husband slipping into bankruptcy, her house a mess, cold and smelling of hot tallow, and her cook an alcoholic. "You find me, my dears, as usual, very busy, but that you will excuse. The African project at present employs my whole time.... We hope by this time next year to have from a hundred to a hundred and fifty healthy families cultivating coffee and educating the natives of Borrioboola-Gha, on the left bank of the Niger."

We have all seen these telescopic philanthropists all over the place, but mostly, unlike Mrs. Jellyby, they are often among the well-off who can easily afford to farm their children out to expensive boarding schools and their husbands out to nightly board meetings. Nearer home, many of us must confess to our own varieties of telescopic philanthropy, devoting energies to great causes while neglecting families, close friends, and the neighbors next door whose names we often do not know.

Osler denied being a philosopher, "I have never succeeded in mastering philosophy—'cheerfulness was always breaking in.'" But then, misquoting Thomas Carlyle, and, just maybe with Mrs. Jellyby in mind, he said his philosophy was "... not to see what lies dimly at a distance, but to do what lies clearly at hand." He returned to this sentiment over and over, and in 1913 delivered an address to Yale medical students, "A Way of Life," in which he advised them to live "... a Life of Day-Tight Compartments."

> Shut close in hour-tight compartments, with the mind directed intensely upon the subject in hand, you will acquire the capacity to do more and more, you will get into training; and once the mental habit is established, you are safe for life.

Mother Teresa has been criticized for not advocating family planning or other far-reaching social schemes for eliminating poverty and reducing the burden of unwanted or unsupportable children. She worked instead only to relieve human suffering that lay immediately at her feet, one by one, day by day. It seemed she had never heard of the social gospel; like many of us, she probably was never able to find it in the Gospels, where we are bidden to ask only for our *daily* bread, and where, as Osler reminded us, the workers in the vineyard were hired by the day, "and we are expressly bidden to take no thought for the morrow." Malcolm Muggeridge called Mother Teresa and her Sisters in Calcutta "love in action," and love is always one to one, day by day. She summed up her Way, "The greatest scourge is to forget the next person, to be so suffocated with things that we have no time for the lonely person, even in our own family, who needs us."

A physician friend used to tell his residents that doctors were "numerator" people, one patient at a time, each one the most important one in that denominator of 1,000! The one-on-one notion may be easier for us.

Of the three, Dickens, Osler, and Mother Teresa, only she lived almost entirely according to the message that she taught and embodied. Such discipline, in spite of Osler's assurance that once established we "are safe for life," is no easy task. Quoting the 17th-century divine George Herbert, Osler urged the Yale students to "Undress your soul at night," and reminded them that "The load of to-morrow, added to that of yesterday, carried to-day makes the strongest falter." He might have added another Herbert aphorism, "Be useful where thou livest."

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On Words, Style, Grammar, and Other Matters

Reflections on Medicine … Conn Med 1998; 62:5

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ONE day last month I was stopped in my tracks by two headlines in the *Hartford Courant.* The first on the front page top left:

Lobbyists
Giveth;
Legislators
Taketh

Eye-catching and true but grammatically dead wrong. The headline writer's attempt to write Elizabethan or Jacobean English failed; he had not recalled from his reading of the King James Bible or Shakespeare that the -(e)th verb ending is third person singular. But why should I assume that he had ever read either?

On an inside page I read:

Let He Who Is
Without Sin …

He was, of course, quoting from John 8:7, "He that is without sin among you, let him first cast a stone at her," but misquoted it, even failing to recognize, actually to sense, that "he" in this instance should be "him," object of the verb "let." Minor errors that become major when printed in 18 or 30 point bold type.

Hypersensitivity to words and syntax may not be genetic but it can be acquired after a few years of copy-editing and proof-reading. My secondary editorial career began 60 years ago when I was editor of our high school newspaper, a triweekly, and later at Oberlin, as page editor on the *Review*, a semiweekly. After an interruption of over 50 years, I resumed this earlier career by accepting the editorship of both the *Journal of the History of Medicine,* and *Connecticut Medicine* , the former for only four years. As another medical journal editor once commented, "One feels like the circus horse in the barn; when the band starts to play your hooves begin to stomp." An editor reads with a pencil or a red pen in his mind, if not in his hand.

All writers commit some mortal, but mostly venial sins; either variety that shows up on the printed page is more embarrassing to the editor, or should be, than to the author. Everyone who writes needs an editor. My wife and daughter are painfully critical editors who sometimes humiliate me by laughing at something not intended to be funny. Bob Brunell scans all the page proofs along with me just before this journal goes to the printer.

Misquotations, reporting cooked data, and writing such things as "studies have shown" are mortal sins. Wrong references are almost impossible to track down, and many reviewers and most editors choose to leave the writer unredeemed, sunk in his sin. "Most studies have shown," if without references, is almost always a lie.

Politically incorrect lines here and there are venial and rarely bother me, although I have become sensitive to exclusive use of the male third-person pronoun, but equally offended by "his or her," or worse still "his/her." Leaving the subject in the singular, "a patient," and then referring to "they, their, or them," is an abomination. Example: "Everyone should have a choice of their physician." Another example appeared in the *Courant:* "Each mother, no matter her circumstances, takes an optimistic gamble on the future, whether they know it or not."

All editors have words that they rarely permit to see the light of day; mine include: most vulgarity, "impact" used to mean affect or effect or consequence, "lifestyle," "reach out or outreach," "which" instead of "that" in a defining clause, and "in the context of." Joseph Epstein, former editor of *The American Scholar,* added a few more expressions of the "reach out" psychobabble-type: "*...special, caring, and sharing,*" and I would add *healing* when the reference is not to wounds, ulcers, and fractures. Incidentally, his views of the words "gay " and "Lesbian" are the same as mine. A Lesbian is a native of the Greek isle of Lesbos, and gay, a perfectly fine word of ancient vintage (Chaucer used it) has been forever lost.

> Be comforted! Thy grief shall pass
> away.
> Art thou elated? Ah, be not too gay;
> Temper thy joy; this, too, shall pass
> away.

The world is full of books telling us how to write acceptable English. Among the classics are *A Dictionary of Modern English Usage*, by H.W. Fowler, usually referred to just as "The Fowler," and, by the same author, *The King's English.* The title dates it: first edition 1906, third edition 1931. These books are more fun to read than to use; for example:

> **SHALL AND WILL**
>
> It is unfortunate that the idiomatic use, while it comes by nature to Southern Englishmen (who will find most of this section superfluous), is so complicated that those

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> who are not to the manner born can hardly acquire it; and for them the section is in danger of being useless. In apology for the length of these remarks it must be said that the short and simple directions often given are worse than useless. The observant reader soon loses faith.... (*The King's English* , p 142.)

For me *The Chicago Manual of Style* is quite adequate, and for the Journal, *The American Medical Association Manual of Style* (8th ed) has served well for almost a decade. Anyone intending to write a medical article needs a copy close at hand. I have kept a "Strunk" by my typewriter, now word processor, for 35 years. *The Elements of Style* by William Strunk, Jr., was first published in 1937. Macmillan brought out a new edition in 1959 that had been somewhat revised and expanded by E.B.White (remember *Charlotte's Web*?). A professor of religion and Old Testament Hebrew asserted that E.B.White was the finest writer of English prose in the 20th century! If, by chance, you are unfamiliar with this gem, find a copy. Some examples of his straightforward style:

And/or.—A device borrowed from legal writing. It destroys the flow and goodness of a sentence.

Can.—Means *am* (*is, are*) able. Not to be used as a substitute for *may* .

Comprise.—Literally *embrace.* A zoo *comprises* mammals, reptiles, and birds, (because it embraces, or includes, them). But animals do not *comprise* (embrace) a zoo— they *constitute* a zoo.

Contact.—As a transitive verb, the word is vague and self important. Do not *contact* anybody; get in touch with him, or look him up, or phone him, or find him, or meet him.

Data.—A plural, like *phenomena* and *strata.*

Different than.—Here logic supports established usage: one thing differs *from* another, hence *different from.* Or, *other than, unlike.*

In the eighth grade I took a course called General Language in which we learned about the history of the alphabet, the history of English, including a little Anglo-Saxon, more than a smattering of French, German, and Spanish, and a second semester devoted to Latin and enough Greek to recognize ΑΒΓΔ. I recall a formal debate by six students chosen by the teacher on the topic: Can we think without words? We were then asked to write a paper, taking one side or the other; I argued that without words thinking is impossible. Now I would argue that we cannot think in the way that human beings think without language. In his prologue, the author of St. John's gospel announced this with conviction, "In the beginning was the Word." He used, of course, the Greek *logos*, which my lexicon defines as "the word by which the inward thought is expressed, or reason itself."

I suppose that since the Hundred Years War, when Anglo-Saxon and Norman French slowly fused into something recognizable as English, Chaucer's English, the aging crowd has warned that the language of those under 30 was degenerate and incomprehensible. I recall reading some lines from the 15th-century printer, William Caxton, that appeared in the prologue to his translation of the *Eneydos* (Aeneid). He was apparently copy-editing his own prose:

> ... I saw the fayr and straunge termes therein.... I doubted that it sholde not please some gentylmen whiche late blamed me, sayeng that in my translacyons I had over curyous termes whiche coude not be understande of comyn peple, & desired me to use olde and homely termes in my translacyons.

But it seems to me that something else is happening today; the language is becoming more and more imprecise. Science writing has not much suffered from this imprecision virus; in the physical and biological sciences the writers are up against verifiable reality. But in the social, psychological, and political sciences, as well as in the bureaucracies that are akin to these "sciences," such as education and management, and in the spreading crop of "studies," women studies, black studies, gender studies, obfuscation is the rule. Words or expressions such as *relate to*, *multiculturalism, diversity, validate, authenticate, value-laden, value-free, phallocentric, meaningful, significant other, disadvantaged, mentally challenged,* obscure rather than express thought, hardly the function of the *logos*. Rarely has this entered the medical literature except perhaps in the behavioral sciences and medical history or sociology. I quote an example:

> The narrative of the work is largely spatial grafting and making, moving and retaining. Given the histological basis of their analysis, this is what they see. But they also use the verbs of gift and display in the story of the rabbits.... What does the language habit tell us about the philosophy of these scientists? Are they really confused about the ontological status of their research animals, or the reality of what they are recording?[1]

If someone were to ask me to put this in my own words, I would be lost. Surely there is danger in encouraging too much of this sort of confusion in our language. Orwell's *1984* demonstrated that critical thinking can be effectively destroyed by making changes in the language that deprive it of meaning. Perhaps we need an Academy of the English Language, analogous to the Académie Français, with postmodernists and deconstructionists either excluded or in a tiny minority.

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A Sustainable Medicine

Reflections on Medicine ... Conn Med 1998; 62:7

ROBERT U. MASSEY, M.D.

> The great secret, known to internists and learned early in marriage by internists' wives, but still hidden from the general public, is that most things get better by themselves. Most things, in fact, are better by morning.
>
> —Lewis Thomas.[1]

WHEN Lewis Thomas wrote this in the early 1970s we were spending 80 billion dollars annually on health care in the United States, about 8% of the GNP. Now it is more than 12 times that amount, about 15% of the GNP, and growing. Even back then he observed, "The health-care system [was] "a bewildering, essentially scatterbrained kind of business, expanding steadily without being planned or run by anybody in particular." HMOs were new, "spreading out across the country like post offices, ready to distribute in neat packages, as though from a huge, newly stocked inventory, health." He feared then, a quarter century ago, that "we will end up spending all our money on nothing but that." What he did not imagine then was that a whole crowd of robber barons would get fabulously rich in the process!

It all began slowly enough, this growth in demand for medical care. Since midcentury the ratio of physicians to population has more than doubled, in some places perhaps tripled. The rising costs of health care continue to outstrip inflation, and, although growth in these costs slowed somewhat coincidently with the rise of managed care, they have begun to go up again. Appropriations to the NIH will this year increase by three to four times the rate of inflation.

You may recall Lewis Thomas's description of the three technologies of medicine: the nontechnology, "supportive therapy," "caring for," "standing by"; then the half-way technology, expensive, time consuming, "highly sophisticated and profoundly primitive," transplantation, dialysis, coronary bypass surgery, angioplasty, chemotherapy, giving rise to "all kinds of electric gadgetry, and whole platoons of new professional personnel"; and finally the high technology, "exemplified best by modern methods for immunization and effective antibiotic therapy." This high technology is always "relatively inexpensive, relatively simple, and relatively easy to deliver."[1]

Until recently I believed, perhaps naively, that once we had discovered the cause of a disease, we could in time devise a simple, inexpensive way to prevent it or cure it. We could repeat the marvelous feats of Edward Jenner, Albert Sabin, and Jonas Salk and wipe out, not only smallpox and polio, but everything else, including AIDS, tuberculosis, malaria, and yes, hypertension, heart disease, stroke, cancer, depression, arthritis, and drive that unholy crowd from the face of the earth, and do it all cheaply. I even said so publicly to the various cost-control outfits that were all over the place in the 1970s, and legislators who failed to comprehend why a state-supported medical school should be in the research business.

But those of us who thought that way were apparently wrong, not in the notion that, if we could save lives and stamp out disease, the whole health enterprise would dwindle, reduced to taking care of accidental, uncontrollable events. But we forgot that most new technology was, in fact, Thomas's "half-way technology," terribly expensive band-aides and bailing wire, mostly "electric gadgetry." That kind of technology increases costs, drives demand, expands the market, fascinates its users, and often diminishes civilized life. Look at Viagra!

In his most recent book, *False Hopes: Why America's Quest for Perfect Health Is a Recipe for Failure*,[2] Daniel Callahan continues his crusade for reasonable, thoughtful, tough planning decisions, and "setting limits"—this last the title of his book of a decade or so ago. He reminds us that we have put together an unsustainable medical care system, one that will finally reduce our ability to provide adequately for other social goods, such as education and universal health insurance. We have known for years that health-care costs could not continue to rise forever, that the system was running out of control, unsustainable. But the Jackson Hole group lead by Paul Ellwood, Alain Enthoven, and the insurance nabobs said no problem; managed care, "managed competition," would fix it. We felt uneasy about deliberately letting market forces into a profession that had for more than 2,000 years professed to reject them. Now discontent and unhappiness abound, our patients are angry, harassed doctors are retiring early and advising their children not to follow them into the profession, we have 41 million uninsured, many with little or no way to pay for medical care, and costs continue to outstrip inflation. The whole "scatterbrained" enterprise is as unsustainable as ever.

ROBERT U. MASSEY, M.D., Professor Emeritus, Division of Humanistic Studies, Department of Community Medicine and Health Care, University of Connecticut School of Medicine, Farmington.

Callahan, early in his book, defines what he means by "sustainable medicine."

> A sustainable medicine will have three characteristics. It will first provide the people of a society with a level of medical and public health care sufficient to give them a good chance of making it through the life cycle and of functioning at a decent level of physical and mental competence. It will, second, be a medicine that can be equitably distributed without undue strain, affordable to the society. It must, third, be a medicine that has, with public support, embraced finite and steady-state health goals and has limited aspirations for progress and technological health goals. (p 35)

A hard saying for a society fixed upon perpetual youth, perfect health, and a medical "break through" every month! Later Callahan works carefully through the requirements for reaching the goal of sustainable medicine:

> ... only (a) a population-oriented health policy, combined with (b) a strong emphasis on personal responsibility and working hard for (c) reduced dependency upon technological medicine, would be sufficient to bring about a sustainable medicine. (p 209)

The road to a sustainable medicine includes setting limits on demands for perfect health throughout an unlimited life span. Market forces driven by profit must be divorced from medicine. "[I]f the outcome of a move to the market is an unsustainable medicine, then the net result is nothing less than a communal disaster, even if many individuals and some sectors of the community are better off." (p 210)

Although Callahan has provided, in some detail, a reasonable strategic plan to avoid almost certain disaster, like the steps to avoid disaster from global warming, it will receive little support from our political masters, both in and outside the health enterprise. Self-discipline in our free-spending, indulgent Western society is mighty unpopular. Nevertheless, *False Hopes* should be read by those concerned with medicine and medical education in the years ahead; it is a scholarly trip through 19th- and 20th-century medicine's twists and turns during what the author describes as its first and second eras. We should now be laying plans for the third era. His introduction of occasional communitarian concepts is a refreshing draught after the surfeit of rights talk to which we daily are subjected from both the left and right. To move toward a sustainable health-care system will require more devotion to solidarity and equity than is common to our individualist and rights-addicted society.

If we were to accept (and one day we surely must) steady-state medicine, we would need to resolve a number of tensions between opposing polarities (p.243):

Manipulating nature	*vs*	Respecting nature
Pursuing health	*vs*	Accepting illness
Promoting public obligation	*vs*	Accepting personal responsibility
Seeking personal choice	*vs*	Tolerating imposed limits
Chasing progress	*vs*	Living with steady-state medicine

My concern about all this is that any notion of limiting progress, especially in biomedical technology, will awaken a lunatic fringe of Luddites who will try to restrict support for sound biomedical research on the grounds that we can't afford it, and that we know enough already. Lewis Thomas's idea of the "high technology" of medicine being both affordable and effective was right. But we are not there yet; its full bloom may be generations away. "Then what?" he asked. Callahan, and Thomas as well, I believe, would accept a life expectancy of somewhere between 75 and 82, would oppose such things as cloning and genetic engineering, especially messing around with the lethal gene, and for both the metaphor of Dr. Holmes's "The Deacon's Masterpiece, or the Wonderful 'One-Hoss Shay'" would be exactly right.

> The poor old chase in a heap or mound,
> As if it had been to the mill and ground!...
> ... it went to pieces all at once—
> All at once and nothing first—
> Just as bubbles do when they burst.

Thomas added, "This is, in high metaphor, what happens when a healthy old creature, old man or old mayfly, dies.... What a way to go!"[3]

The Germans, who have been at this business of universal health insurance since Bismarck and the 1880s, thought that by requiring everyone to purchase health insurance, and paying the premiums for those who could not afford it, and by limiting premium increases to the rate of inflation, they could control costs, create a sustainable medicine, assure general satisfaction. But all this does not stop demand, and demands, from both inside and outside the profession, put pressure on the politicians. All sorts of accommodations are made, and the cost of medical care rises again, outstripping all other social goods. And now even the Germans are looking to the market, examining, heaven help them, our managed-care fiasco.

Attitudes about life and death, health and illness, perceived individual rights, personal behavior, social responsibility—all have to change. That is a big order, especially during this time of high prosperity. To get this done, we may have to wait for the next depression.

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Suicide Is a Private Affair

Reflections on Medicine … Conn Med 1998; 62:12

ROBERT U. MASSEY, M.D.

> I am inclined to follow the course suggested by a friend … who says that he has always followed the rule never to murder a man who is committing suicide.
>
> —Woodrow Wilson, 1916

BEFORE a record audience last month "Sixty Minutes" showed an insane exhibitionist killing his patient by injecting KC1, an event, I suppose, not surprising in this *fin de siècle* Western world. It was egregiously bad taste, of course, but that hardly matters in these vulgar times. One had only to listen briefly to Dr. Kevorkian to recognize his monomania; according to Dr. Paul McHugh, the Henry Phipps Professor of Psychiatry at Johns Hopkins, he is "'certifiable' in that his passions render him, as the state code specifies, 'dangerous to others.'"[1] If Michigan courts sentence him, they will have created a martyr—exactly what he and the Hemlock crowd want. Good, sound psychotherapy is what he needs, and a monitored retirement.

But the issue will not go away, and the rightness or wrongness of physician-assisted suicide or euthanasia will not be settled by referendum or legislative action or by Mike Wallace's show. Our 18th-century founders, tutored in the Age of Reason, believed in democracy because they believed that the people either had received or had within themselves by virtue of the Natural Law a reliable moral compass, a sound guide in moral philosophy. The fundamental morality of the Judeo-Christian inheritance was thought to be sufficiently binding on all rational creatures to assure mostly decent public as well as private behavior. Transgressions were followed by shame and exclusion, both unpleasant and unprofitable. When support for public morality began to weaken, sins were transformed into laws, and laws could be changed, repealed, disregarded by each new generation. In the process, for many the sense of wrong-doing went by the way, the moral compass became demagnetized, was tossed out, one thing became as good as another, whatever.

> The Americans combine the notions of Christianity and of liberty so intimately in their minds that it is impossible to make them conceive of the one without the other.… in America one of the freest and most enlightened nations in the world fulfills all the outward duties of religion with fervor.[2]

Alexis de Tocqueville wrote that in 1835. We now and will for the foreseeable future live in a postmodern world of moral relativism, multiculturalism, where ideas, texts, ethics, and manners are all of equal value or no value, at least among a highly influential bunch of academics and opinion leaders. "If you believe your idea is true, well, then for you it is!"

This being the case, and we admit to living in a world of moral strangers, where patients must probe their doctors to discover their ethical systems, then we ought to leave the matter of euthanasia or assisted suicide alone. That it is illegal in most places may deter random killing for fear of a whistle-blowing nurse or house officer or suspicious relative. "Mercy" killing will still occur, as it always has, privately where trust between physician and patient has been long-standing, and where every precaution has been taken to assure privacy. No need for you or me to approve of that or to disapprove—we'll never know and we are after all moral strangers.

But pass a law making it legal, and it will happen all over the place; not at first, but in 10 or 20 years, at least a third of this voluntary killing will be involuntary, as it is in Holland. The numbers of "lebensunwürtige," those for whom life is deemed not worth living, will grow to include categories of young and old, demented, enfeebled, and deformed, and those who have been subtly persuaded that they are really nuisances, in the way, and awfully expensive.

Finally,we and our representatives should repeat over and over: taking life is never medicine's business. We have sworn that as physicians we will never engage in this kind of morally unsavory practice. Opinions about suicide have differed in the West since ancient times. Cicero: "The god who rules within us forbids us to go hence without his command." Pliny the Elder: "Amid the miseries of our life on earth, suicide is God's best gift to man." How can you settle that by a referendum or in the courts? It is a moral issue, and we physicians can do no better than to hold with our Oath: "I will give no deadly medicine to any one if asked, nor suggest any such counsel."

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Michele R. Norbeck
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Robert U. Massey, M.D.
The UCONN Years

JOHN W. PATTERSON, M.D.

IT is an honor to have a chance to participate in the recognition of Dr. Robert U. Massey, M.D. as an outstanding physician, scholar, educator, and editor. I assume that I was accorded this honor because of my association with the development of the medical school at the University of Connecticut, as one of the planners, as a faculty member, as Dean, and as Vice President for Health Affairs at one time or another between 1963 and 1992.

Dr. Massey's professional career in Connecticut extended through an exciting period when medical education and medical research were being rapidly expanded in the United States. The School of Medicine at the University of Connecticut was one of 22 new medical schools started during the 1960s. Clinical Research Centers were being started and funded at qualified medical institutions. I had the privilege of serving on the National Institute of Health's committee that was responsible for visiting, evaluating, and selecting Clinical Research Centers. One of the visits in the early '60s took me to the Lovelace Clinic in Albuquerque, New Mexico. There I met Dr. Massey for the first time. He was head of the Medical Department and was recognized as a major contributor to the success and distinction of the institution. In 1968, I had the pleasure of inviting Dr. Massey to come to the University of Connecticut as Associate Dean of Graduate Medical Education. Fortunately for us, he agreed to join the enthusiastic young faculty that was preparing to meet the first class of students in the Fall of 1968.

When Dr. and Mrs. Massey moved to Connecticut the Medical-Dental School was being started in temporary facilities. The Veteran's Hospital in Newington was approved as a Dean's Hospital in 1968 and it was expected to be a major site for graduate education. The other temporary arrangements for the school were described by Dr. Massey in a 1981 speech to the Beaumont Club as follows:

> In 1967, anticipating delays in the availability of the university hospital, the administration and faculty took over operation of McCook Hospital, a 130-bed municipal hospital in Hartford's north end. Some staff offices and teaching space, as well as a small clinical program, were assured by this move. An auditorium in the Jones Home next to McCook Hospital served as a lecture hall, and it was here on a hot September day that the Governor in his shirt sleeves congratulated the students and spoke of the culmination of a dream. The dean's offices and the Health Center administration moved into the 15th floor of the Hartford Plaza; the library assembled its collections in the Security and Exchange Insurance building at 1000 Asylum Avenue, under the leadership of the librarian, Mr. Sam Hitt, and with the support of a $100,000 grant from the John and Mary Markle Foundation.
>
> Temporary buildings were erected at Farmington to provide laboratory space for faculty and classrooms, and multidiscipline laboratories for students. Until these facilities were available, students were bused to Storrs where they could begin their studies in the Life Science Building. Trailers were added to the complex of temporary buildings for additional laboratories and offices in Farmington, and for additional teaching and conference room space on the grounds of McCook Hospital.
>
> The City agreed to build an ambulatory care facility near McCook which the university would continue to staff; agreement was also reached that McCook's inpatient service would be discontinued on the opening of the University Hospital in Farmington.
>
> Affiliation agreements were signed with Hartford Hospital, Saint Francis Hospital, Mount Sinai Hospital, New Britain General Hospital, and the Institute of Living.

These resources were vastly different from the ones that Dr. Massey was accustomed to in Albuquerque. Never-the-less he and June accepted the challenge and joined the faculty and students as they embarked on their innovative program of medical education. The initial faculty was characterized as being bold enough to adopt practices that were evolving at places such as Western Reserve School of Medicine in Cleveland. Dr. Massey, in his Beaumont Club speech, noted that:

> … the Western Reserve program came into being as one of the major changes in medical education since the Flexner Report in 1910. In the words of Vernon M. Lippard, "this was a curriculum which abandoned all thought of total coverage. Emphasis

> was placed on basic concepts; the mechanisms of disease; continuing self education; the development of scientific critique; the cultivation of skills; the inculcation of ideals. Although the departmental structure of the schools remained unchanged for administrative purposes, teaching by disipline was discontinued and the program was planned by interdisciplinary subject committees."

During Dr. Massey's three year tenure as Associate Dean he was concerned primarily with enhancing the clinical resources available for the teaching programs. He worked effectively with the faculty and the staff at McCook, the VA and the affiliated hospitals. He was respected by his colleagues for his clinical qualifications and for his scholarly approach. When the position of dean became vacant as a result of separating the responsibilities of the dean from those of the executive director of the Health Center, Dr. Massey was asked to assume the position as Dean of Medicine. He served as Dean from 1971 to 1985.

In the '60s there was a national interest in preparing more individuals to be family physicians. This was seen as a possible means of increasing the number of physicians for under served areas in certain urban and rural settings. In 1966 the "Millis Report" or more formally "The Graduate Education of Physicians" report was developed for the Academy of General Practice. It advanced the idea of having "Coordinating Physicians" who woud be backed up by specialists. The planners at Connecticut were impressed with this model and proposed having departments of medicine and pediatrics that educated generalists and a third department that educated specialists. This idea proved to be ahead of its time and recruiting faculty was difficult. Therefore, the concept was abandoned in favor of starting a Department of Family Medicine as soon as it was recognized as a specialty. A division was organized in 1971 and it became the Department of Family Medicine in 1974. When these changes were made the departmental structure of the school became similar to that of other medical schools and most of the personnel required to staff a university hospital were in place. The hospital was opened in 1975 and named the Dempsey Hospital in recognition of the key role that Governor Dempsey played in making the school of medicine become a reality.

A Department of Community Medicine and Health Care evolved from a conviction that some aspects of knowledge usually found on a University's main campus such as behavioral science, medical sociology, the organization of medical services, epidemiology and public health should be integral parts of the medical curriculum. Medical Humanities became a required course for students and covered the relationships of health, law and ethics. In addition Dr. Massey arranged elective seminars for students, faculty and others who were interested in medical history and wished to explore the cultural and social settings that affected change.

A teaching hospital with 400 beds was planned and is strongly desired. However, beds were limited to 200 because adequate funds were not available. In the mean-time each of the community hospitals felt there was a need for more beds and each increased their total number of beds by about 200. Subsequently, as a result of changes in the delivery of health care, and the action of regulating agencies, the community was considered to be "over-bedded" and any further expansion of Dempsey Hospital was indefinitely postponed. This required some rethinking of the plans for the use of available clinical resources for the medical education program. It was felt that the university hospital could "provide a base for research, highly specialized patient care, and parts of the education program" but affiliated community hospitals that were willing to provide a favorable educational environment for clinical programs at the undergraduate and graduate levels would be essential. Affiliated hospitals were expected to have full-time chiefs of service in all major departments and have at least one department that met the requirements for an approved graduate program. Hospitals have responded favorably to this need and have developed increasingly large and capable full-time staffs.

The Capital Area Health Consortium was incorporated in1974 by hospitals in the greater Hartford region to work together in areas of common interest related to education and patient care. The Dean of the School of Medicine serves as an ex officio member and chairs the Council on Education and Research. This Council is responsible for all residency planning. A 1998 institutional self-study task-force notes:

> The University of Connecticut was one of the first schools in the nation to assume institutional responsibility for graduate medical education. The Committee on Graduate Medical Education develops all policy, approves the standards for all programs, and reviews and approves each residency program, including those in community hospitals that wish to be identified as University approved programs. A detailed periodic review of all programs is conducted according to standards more rigorous than those of the LCGME, utilizing outside reviewers, faculty and house staff.... Both educational and clinical programs have been extensively regionalized through the development of the Capital Area Health Consortium; medical student programs are in almost all of the consortium hospitals to the benefit of both the University and the hospital.

In 1984 the Capital Area Health Consortium established the Robert U. Massey Award for distinguished service on behalf of the consortium. Dr. Massey was the first recipient.

Research activity at medical centers to a large extent depends on the availability of federal funds. The National Institutes of Health is the largest source. Dr. Massey understood the importance of research and fostered its growth. Despite increasing competition the school has achieved national and international prominence for its research contributions. Quantitatively, it has ranked among medical centers between the first and second quartile. The availability of space has been a limiting factor. The recent completion of new laboratory space will alleviate this problem.

Administrative autonomy and the freedom to make decisions varies among public universities and medical centers all the way from those that have constitutional autonomy comparable to that of a private institution, to those that are considered to be state agencies requiring pre-audits of administrative decisions and variable annual budgets. Connecticut is at the latter end of the spectrum. This is cumbersome and inefficient when operating a dynamic enterprise that involves ongoing hospital care, ambulatory care and research. Years of effort on the part of the deans, vice-presidents, the president and the Board of Trustees were required before the legislature was satisfied of the need for greater administrative autonomy in purchasing and contracting. After the establishment of a satisfactory internal decision making process and an acceptable post-audit system the John Dempsey Hospital Finance Corporation was authorized in 1987 to make final decisions on hospital actions such as contracts and purchasing. A Faculty Practice Plan was approved by the Board of Trustees and the Attorney General's office in 1975. The authority of the Finance Corporation was extended to include the faculty practice plans in 1992.

Dr. Massey retired as Dean of Medicine in 1985 with a distinguished record. His leadership advanced the ongoing programs of the Health Center and the School of Medicine. The first class of medical students graduated during his tenure as dean and he noted that they had never set foot, as students, in the new Health Center building. He continued his activities as a faculty member until 1993. During this period the elective seminars in medical history were continued and he continued his activities to advance the development of the Health Center and the Hartford Medical Society libraries. His love of books is recognized by the Robert Massey Collection of books in the Health Center Library. Dr. Massey became the Editor of *Connecticut Medicine* in 1986 and continued in this capacity through 1998. He will be remembered for his monthly "Reflections on Medicine." Dr. Massey also served as the Editor of the *Journal of the History of Medicine and Allied Sciences* from 1988 to 1992.

I will remember Bob and June as kind and affable friends to whom I am indebted for many personal and professional favors.

John W. Patterson, M.D.
Emeritus Dean,
University of Connecticut School of Medicine
Farmington, (1968–71)

Letters to the Editor

Letters to the Editor are considered for publication (subject to editing and abridgement), provided that they are submitted in duplicate, signed by all authors, typewritten in double spacing, and do not exceed 1-1/2 pages of text (excluding references). They should not duplicate similar material being submitted or published elsewhere. Letters referring to a recent Journal article should be received within six weeks of the article's publication.

Letter to the Editor: Dr. Robert U. Massey, Dean, School of Medicine 1971 to 1985, clinician and consummate scholar, is one of the most respected men to have graced the halls of the University of Connecticut Health Center since it's physical beginnings in 1967.

Physician and Chairman, Department of Medicine, the Lovelace Clinic in Albuquerque, where he was active in the affairs of the School of Medicine, Bob was attracted to the Health Center by its second Dean, John Patterson, in 1968 as Professor of Medicine and Associate Dean. He succeeded John as the third and still longest tenured dean. Broadly read in history and the classics, and a man of great wisdom and perspective, his respect from the faculty extended from those involved in bench research to clinicians in the applied pursuits. Kindly by nature but intolerant of fools, suspicious of untested ideas but a man with a sense of adventure, he guided the school firmly and with great foresight through its most crucial and formative years.

Bob's interests in the classics and history were expressed by his development of a faculty in philosophy and law in the Department of Community Medicine, where he held his academic appointment, and a program in the History of Medicine that holds his name today. He did this with a firm grasp of what was excellent in these fields. One of the school's finest faculty members, the late Jay Healey, nationally recognized teacher in law and ethics, was attracted to us by these ideas.

In his private life, Bob has a fierce sense of loyalty to his family that is rare and beautiful. He and his charming and talented [musician] wife June lived "back to the outdoors" in earlier days and now in a house built for them by a master carpenter. Bob is a craftsman himself, builder of clock cabinets and cradles. They have firm values and are deeply religious students of Christianity. He has taught himself Greek to broaden his understanding of the classics and religion. His adventuresome spirit has led Bob to drive a Fiat convertible [fast] and they together have sailed in old fashioned boats, flirting with the dangers along the foggy coast of Nova Scotia and appearing less than suave along the fashion plate coast of eastern Maine.

His role as Editor of *Connecticut Medicine* furthered excellence of the Journal while enabling Bob to use his array of talents wonderfully. He is one of those rare and great men. He will continue to use his innate scholarship and insatiable desire to learn for his forever.... As his physician and long- term colleague, I would guess his chances for making 100 are as good as any I have seen!!

James E. C. Walker, M.D.
Professor of Medicine [Geriatrics], Emeritus
University of Connecticut School of Medicine

Letter to Dr. Massey: On the occasion of your retiring as Editor of *Connecticut Medicine.* I wanted to add my congratulations and best wishes for all you've done to advance medical education in Connecticut.

You must feel a great sense of satisfaction and enthusiasm for the dynamic growth and the obvious quality of the University of Connecticut Health Center in Farmington. The students, faculty, management, and hospital combine to make the Health Center a great asset which generates a lot of Connecticut pride.

It's hard to realize that you were the Dean of the University of Connecticut School of Medicine before the first group of medical school students graduated. Your enthusiasm and the unique combination of your clinical background, scholarship and management served the University and the State very well and I certainly enjoyed your receptivity to joint programs with Hartford Hospital and the hospital members of the Capitol Area Health Consortium.

Your encouragement and persistence was just what I needed to have my article, "The 1918 Flu Epidemic in Hartford, Connecticut" published in *Connecticut Medicine.*

Since I am a strong believer in the principle that management's responsibility is succession, congratulations to you for encouraging Dr. David Crombie to be your successor as Editor of *Connecticut Medicine.*

John K. Springer
Chairman, MedSpan, Inc.
Former President and CEO , Hartford Hospital

Letter to the Editor: I remember many things about Dr. Massey—all good. I always read his page first when I received my copy of *Connecticut Medicine.*

Dr. Massey came to the University of Connecticut School of Medicine as its third dean. He had attended Detroit public schools and the Wayne State University School of Medicine. He had his residency at Henry Ford Hospital, then went to the Lovelace Clinic in Albuquerque, New Mexico.

One of his first speaking engagements was at the Board-Staff dinner at Hartford Hospital. At the conclusion of his talk, the then Chief of Staff said to me: "That guy makes sense!" He still does.

As one of the few Wayne State University School of Medicine alumni who made it all the way to Connecticut, he served as School of Medicine Dean for longer than any other. When he went to *Connecticut Medicine* he continued his good work.

Having known Bob Massey and his family both socially and professionally, I count them among our very best friends. *Connecticut Medicine* has been fortunate to have had him as its editor these last years. May it continue to do as well.

T. Stewart Hamilton, M.D.
Retired President of Hartford Hospital

Letter to the Editor: I was very pleased to learn that this issue of *Connecticut Medicine* honors Dr. Robert Massey, one of the most loved and admired members of the original faculty at the University of Connecticut Health Center.

Bob Massey was Dean of the School of Medicine during most of the years I chaired the Department of Pediatrics. Throughout those early years, Dr. Massey was always accessible and extremely supportive of my efforts to successfully recruit and retain a class pediatric faculty. Furthermore, he extended my career at the Health Center for another nine years after I retired from the chairmanship, by very promptly appointing me Associate Dean for Medical Student Affairs, a position I thoroughly enjoyed, not the least of which because it brought me in to even closer contact with Dr. Massey.

There can be no doubt that my good friend, Bob Massey, played an important role in the final 25 years of my academic career. I wish him many more happy retirement years.

Milton Markowitz, M.D.
West Hartford

Letter to Editor: The Medical School's basic scientists' view of Bob Massey was formed very early on the basis of discussion and presentations at early faculty meetings. It was clear that Bob Massey is a true scholar in every sense of the word. Of particular importance to us was his obvious conviction that research is an important component of faculty activity, and his commitment to maintaining an important role for faculty in deciding institutional directions.

During the early years of the University of Connecticut Health Center development we were faced with strong feelings in some political circles that our emphasis on research (and patient care) was unwarranted and added unnecessary expense to the building and operation of the school. Our charge, in their view, was solely to teach medical and dental students. Because of this, Dr. Massey's strong commitment to research was very significant. In one presentation, he said:

> Clearly research is one of the obligations of the faculty. In the basic sciences, scientists are our teachers. Their careers are in science. You can't 'practice' science. A professor who is not involved in research is no longer a scientist, and there is nothing more deadly to contemplate than medical or dental students exposed to a teacher who hasn't been doing creative work for ten years. We cannot have clinical faculty who are not practicing medicine. A clinical teacher, to be exciting and believable, also should be involved in scholarly activities. Research is important in both teaching and serving the nation. It is the essential work of the scholar. Research makes new knowledge. Making new knowledge and transferring that knowledge to others is the prime function of a university.

In response to a questionnaire sent out by a faculty committee reviewing the teaching of the basic medical sciences he stated:

> I have revealed my prejudice: an environment that states unequivocally that scholarship is the business of the academy; a faculty devoted to the acquisition and transfer of knowledge; a student body determined to learn for all or many of the various reasons that student-physicians want to learn; an administration who sees its duty to provide for and protect the academy so that these things take place—the process then evolves, grows, changes, adapts in an almost organic way. ...

Shortly after Bob became dean, he was faced with an issue which tested his commitment to the integrity and independence of the school and its faculty. At that time, the Commissioner of Finance insisted that all appointments of faculty be subject to his approval. This policy had a number of objectionable features, the most important being that the form for submitting the request for approval required the appointee's curriculum vitae and a delineation of the courses he/she was to teach. Needless to say, in our view this was an intolerable insertion of politics into board and faculty prerogatives which could strongly (and wrongly) influence the direction the school would take in the educational process. Bob did not hesitate, being convinced that no faculty recruitment was preferable to political interference in this process. In his defense of academic independence he immediately instructed all department heads that there was to be no further recruitment of faculty until it was understood that faculty appointments could and would be made without approval by anyone other than university officials. Fortunately, due to efforts by Bob and several other administrators, this was quickly accomplished.

Finally an unimportant incident which sticks with me occurred at the time of the search for a replacement for Dr. Patterson as Dean of the Medical School. A search for a new dean always brings out anxieties. Basic scientists are concerned the new dean might be a clinician with no regard for basic science or research, while clinicians worry that the new dean might be a purely academic type with no understanding of problems of clinical practice. Dr. Massey was a prime candidate, with strong backing from both clinical and basic science faculty. Quite naturally the search for a new dean and all its ramifications was a major subject of hallway conversations. In one such casual conversation among a few basic scientists, the suggestion was made that we get Bob Massey appointed right away, before the clinicians discover he's really a basic scientist in disguise. While this, of course, was said in jest, it clearly illustrates our respect for Bob Massey.

Sherwin J. Cooperstein, Ph.D.
Professor Emeritus,
University of Connecticut Health Center
Department of Anatomy, Farmington

Letter to the Editor: Regarding Dr. Robert U. Massey, I can tell you we were across-the-road neighbors with Dr. W. Randolph Lovelace II, the nephew of the founder of the Lovelace Clinic. Uncle Doc, as he was called, was a superb surgeon who was among the Founders of the International College of Surgeons.

I joined the Lovelace Clinic in 1948 because there was being put in place the "Mayo of the Southwest" ie, the Lovelace Clinic and the Lovelace Foundation for Medical Education and Research.

Dr. Massey became part of the adventure in 1958, acting as the Chairman of the Department of Medicine, serving also on the Board of Governors and in 1960 establishing and heading a Department of Medical Education.

Bob Massey had a "gifted' rapport with patients. I know because he cared for members of my family. The value of such talent was recognized when he was recruited by the Medical School in Connecticut to serve as Professor, Department of Medicine and subsequently as Dean. Also, Bob had scholarly talents evidenced by publications and as editor of *Connecticut Medicine.*

Clayton S. White, M.D.
Albuquerque, New Mexico

Letter to Dr. Massey: I am writing to you across a friendship-span of almost thirty years, during which time each of us has confronted tasks that our respective medical schools never prepared us for. And in curiously parallel careers, we each struggled through these novel chores to reach, now, a point in life where we can breathe deeply, stop for a moment, and reflect upon these past decades.

We each took on the task of running a relatively new New England medical school; then we each rejoined our faculties teaching the social components of our precious profession; and then, we accepted the ediorship of our respective state medical journals for another decade of labor.

I feel deeply proud to have followed a professional path similar to yours. I have admired you, your great skill in persuasive writing, your editorial genius, and particularly the spiritual nature of your perception of medicine. You possess, in truth, so many of the characteristics of Osler, something we rarely encounter in our younger colleagues.

Let me take this opportunity to congratulate you on a life filled with generosity to your fellow creatures. May the years ahead hold much serenity and satisfaction for you and June.

Stanley M. Aronson, M.D.
Dean of Medicine Emeritus
Brown University, Rhode Island

Letter to the Editor: It is with a sense of loss that I write my friend of the intellect, Dr. Robert Massey, Editor of Connecticut Medicine. I will truly miss your essays, and your understanding of the depths in the ocean of medicine, and the meaning of the physician as guardian of the best that civilization has to offer. We care, or we do not, for others one by one. If you are ever near Norwalk, please visit me. At least I can show you my paintings of Sir Isaac Newtion, and autographed photos of Darwin, Schweitzer, and Penfield.

Good luck and good cheer.

Charles W. Needham, M.D.
Norwalk

Letter to the Editor: Throughout the years, whenever I submitted a letter or essay to *Connecticut Medicin*e and my thoughts were not as clear as they could have been, Dr. Massey sent back a letter challenging me to explain myself more clearly or more concisely; or to substantiate my assertions.

From Dr. Massey, I never received a form letter; neither did I ever receive a condescending one. Any letter I received was personal and educational, and when I finished reading it I took his recommendations back gratefully with me to my word processor.

Thank you Dr. Massey. We have been fortunate to have had someone like you at *Connecticut Medicine*. You were objective enough to realize that a state medical journal needs high quality scientific articles to gain and maintain the respect of its readers. And yet you still found space to indulge curmudgeons and allow would-be reformers to have their say. What more could such a diverse readership as Connecticut's physicians have asked for in the editor of its state medical journal?

Edward J. Volpintesta, M.D.
Bethel

Letter to Drs. Crombie and Massey: I want to compliment you both for your respective editorials in the February issue of *Connecticut Medicine,* for what you are about to undertake, David, and what you have provided so well these past 12 years, Robert. Our residents in training are always urged, if not already motivated, to "publish" advances in their respective fields of interest which is of value for expanding knowledge, as well as the writer's CV. The philosophy of medicine as espoused by both of you is frequently lacking in training programs.

Although we have not, as surgical specialists, submitted much material to *Connecticut Medicine* for possible publication, I assure you that your respective editorials will be included in the orientation manual given to residents entering the rotation in pediatric orthopaedics at the Connecticut Children's Medical Center.

With kindest personal regards to you both.

John V. Banta, M.D.
Surgeon-in-Chief,
Connecticut Children's Medical Center

Letter to the Editor: I became a member of the first faculty at the Health Center in 1968, coincidental with my leaving private practice and becoming the first full-time chairman of the Department of Pediatrics at Saint Francis Hospital. At the time of my retirement, in 1991, I had become professor of pediatrics, and of family medicine.

My relationship with Bob Massey developed through the History of Medicine group which met monthly in the History of Medicine Room. In 1996 I gave a presentation on Dr. John F. Enders, West Hartford native, and Nobel Laureate in 1954.

I have become aware of other aspects of Bob's life; his fondness for William Osler, Sir Thomas Browne and Samuel Johnson; his attempt to learn Greek through private instruction; his important role as Editor of *Connecticut Medicine,* all the time maintaining a vital interest in clinical medicine as befits a dean of a major medical school.

I have told Bob of my interest in the poet Wallace Stevens who may have entered the Catholic Church from his deathbed in St. Francis Hospital in 1955. The issue remains unsettled, even now, although I believe that such a conversion occurred, on the basis of existing evidence and opinion; virtually all the principals on an event which (may have) occurred 45 years ago are dead. A recent letter from Bob indicates his confirmed interest in Stevens and a desire to learn more about this probable member of the Church triumphant.

William E. Hart, M.D.
West Hartford

Letter to the Editor: My relationship with Dr. Massey began in 1971, shortly after he was appointed acting dean of the University of Connecticut School of Medicine. I was his secretary, and we shared what had been a bedroom in the former Goodwin mansion in Hartford (he had the window side of the room).

A few months after my taking this assignment, Bob was in the parking lot one afternoon, tinkering with the engine of his little red sports car. While he was gone, Homer Babbidge, president of the University, stopped in unannounced to see him. I diplomatically said that he was in the parking lot and offered to get him; but he said, no, just point him in the right direction and he would go find him. Thus, it was in the parking lot that Bob was offered the permanent position of dean.

Once we were in the same location as the students, Bob felt a need to start connecting with them. Just before the Christmas break, he announced that he wanted to have a wine and cheese reception for the medical students in his conference room. Fritz Hinz, associate dean for undergraduate education, wisely pointed out that in order to ensure good attendance, it should be held immediately after their last class before they left for the holidays. I was in charge of shopping for cheese and crackers and Bob bought the wine (we did everything on a shoestring). The party was held, the students came, and afterwards Bob declared that we would never again hold a party in the conference room—the red carpet was covered with blotches of ground-in cheese.

Once a month the Dean's Advisory Committee met, which meant that for every important topic (which was just about everything), Bob sat patiently to listen to the comments made by every clinical and basic science department head. We had a quiet laugh one day when I pointed out that it was the one-year anniversary of the debate between these two groups on the meaning of "creativity" in granting tenure.

In spite of all his administrative responsibilities, Bob still wanted to keep in touch with students and patients. He volunteered to become a student advisor, and he asked the clinic to schedule him to see patients once every other week. Soon he had two student advisees and a patient load of two. It turned out that it was easier to fit students than patients into his schedule.

There were many light moments through those years. Take the day Sherwin Cooperstein, professor and head of anatomy, turned 50 years old. "Coop" is a fairly shy man and was literally unable to resume his lecture after we showed up in the middle of it with a birthday cake big enough to fed everyone in the large lecture hall.

On a recent visit with Bob and June, he reminded me of the hot summer day that the air conditioning failed. Just about everyone had gone home, but for some reason we felt it was important to stay there until the end of the work day. I had kept a fan that we had used in Hartford, so I promptly positioned it so that I would continue to have some moving air. Then when I left for lunch, he appropriated the fan for his office. On my return, I simply marched into his office, unplugged the fan, and returned it to its original location.

Eventually, our professional relationship ended when I left the Health Center. However, a wonderful personal friendship between our families has lasted for these many years, one that I treasure.

Catherine A. Kennelly
West Hartford

Letter to the Editor: I started working with Dr. Massey on the Journal of the Connecticut State Medical Society in June of '91, as managing editor, following the death of Vivian Feriola, who had been with the Journal office since 1950.

Putting the next issue of *Connecticut Medicine* together where Vivian had left off, was accomplished in a timely fashion, due mainly to Vivian's many notes and instructions she had left behind, along with Dr. Massey's patience and timely critiquing. With my settling in to the routine of the Journals' schedule came the urge to rearrange the Journal office's furniture and restructure the Journal's files, folders, etc. Dr. Massey's only comment was that he had an interest in the old wooden desk that I had placed in an out of the way corner, the first editor's desk.

The desk was in pretty good shape, except for the dried out, cracked, and yellowed varnish. My next project! Without Dr. Massey's knowledge, I asked for and received permission from CSMS to refinish the desk for the editor, Dr. Massey, which he proceeded to use until his retirement. Even with the renovation of CSMS and the replacement of all the old furniture with new, Dr. Massey refused to have the desk replaced, the desk continues as the *Editor's Desk* today.

My more memorable incidents with Dr. Massey include his compassionate and always relative stories, his ability to discuss, in the down-to-earth way that he has, life's little "tripping stones." One that comes to mind, was the death of my father from a skull fracture as a result of an accidental fall—his being frozen, then thawed, and frozen again before he was found five to seven days later. He was there to discuss and review the possibilities, which relieved my anxieties, feelings of guilt, and "what if's."

Another was a few years later; my dearest friend and roommate was diagnosed with lung cancer. On hearing the news Dr. Massey was immediately involved to discuss the prognosis concerning lung cancer with me, along with the prediction of only six to nine months longevity. Dr. Massey was always there with his explanations of what to expect, his encouragement during times of frustration and denial, and his understanding of the emotional turmoil involved, through the progression of her disease. Her wish was to remain at home as long as possible, preferably to die at home, which with the discussions and explanations of what to expect, was fulfilled, for she died nine months after the initial diagnosis, at home.

I will be forever thankful for the understanding and support I received from him during the nine years we were associates. A short time later, I had the opportunity to help, in small ways, Dr. Massey through the beginnings of his own turbulent time. I wish him the best in life for I believe he gives his best to others.

Wanda E. Jacques-Gill
Managing Editor, Connecticut Medicine

Letter to the Editor: I keep a framed photograph of Bob Massey on the bookshelf alongside my desk. For several years, I pestered him to give it to me, and finally succeeded. Bob is a modest man, and it wasn't easy, but I'm glad I never gave up the struggle. I need that picture to remind me that a great mind is not like yours or mine. We can only try to emulate it.

I realized just the other day that Bob and I have been friends for close to 25 years, which came as a surprise. There's something about being with him that's fresh each time, and I think I've finally figured out what it is: There are no fixed positions in this unique man's intellect. No fixed positions that is, except for openness, receptivity, and unwavering honesty. I've envied his ability to listen to a new idea, turn it over and over again in his thoughts, retire to read about its meanings, recall a pertinent passage or a poem that touches on its underlying premises, seek guidance in a classic source or the comment of a modern thinker that he has retrieved from the copious back-pocket of his mind—and then come back with a synthesis that is his alone, and far richer than the notion originally presented to him. I can't count how many times over the years my musings have been brought to him half-baked, and then returned, as the Preacher of Ecclesiastes would put it, "ere many a day," ready to be digested, assimilated, and made a part of my own understanding of ourselves and the cosmos.

And even there the process doesn't stop. Though every conversation is new, every conversation still harkens back to the beginning. For with Bob Massey there is no end. There is only more thinking and more turning over and, for me, more of the dynamic excitement of watching that keen and conscientious mind at its fascinating work—which is also its play.

I have been Bob Massey's Associate Editor for the *Journal of the History of Medicine and Allied Sciences*; his Literary Editor here at *Connecticut Medicine*; and an awed observer of more than two decades of his journey through an ever-evolving philosophy of the medical life. In a sense, I am his self-appointed, albeit flawed, acolyte. In his long career as a clinician, teacher, medical dean, author, and editor—in every arena in which he has distinguished himself—Bob has *been* witness and *borne* witness to some of the most transforming events in the history of our calling. In times to come, his sagacious testimony in the pages of this journal and elsewhere will be carefully studied and widely quoted by thoughtful commentators on our turbulent era. Bob Massey has never stopped learning and never stopped teaching. His great mission continues. We are privileged to be its beneficiaries.

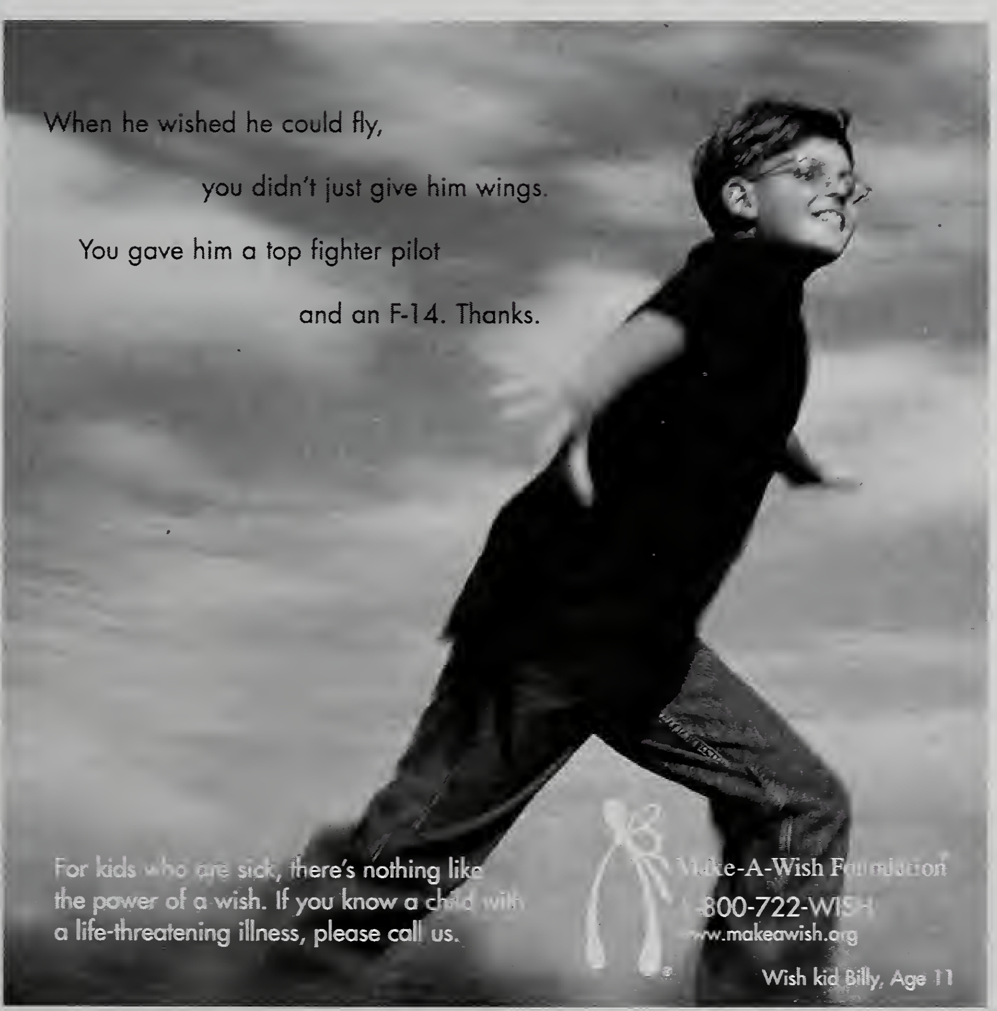
Sherwin B. Nuland, M.D.
Hamden

Letter to the Editor: How difficult it is to put in the proper words what Dr. Massey means to the Connecticut State Medical Society and what a delight it has been for the staff to work with him. It was our good fortune that he accepted the editorship of *Connecticut Medicine*, and his many contributions are visible throughout the journal.

We wish June and him a happy retirement, full of love and zest and intellectual fulfillment. It has truly been a pleasure for all of us at 160 Saint Ronan Street to have had the honor and privilege to work with him.

Best wishes from the staff,

Tim Norbeck
Executive Director
Connecticut State Medical Society



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Poison Information Specialists Always on Call

Most calls received at the Connecticut Poison Control Center involve children, but adults have their share of poisoning accidents. Some can be life threatening, while others are simple to treat, provided you have the right information.

"I remember when a paramedic called because his wife had been cutting up hundreds of hot peppers for canning, and her hands began to burn," said Mary McCormick, Pharm.D., the poison center's administrative director. "He told her to run cold water over her hands, which made it worse. It's the right thing to do for a burn, but not this kind of exposure." The answer, said Dr. McCormick, was warm water to open the pores and flush out the capsaicin, the chemical that makes peppers hot.

Each year during Poison Prevention Week, adults are reminded of the dangers of using and storing potentially poisonous substances around children. Dr. McCormick reminds adults that the poison center is for their well-being as well. "All too often, adults think they can treat themselves. In almost all cases, our specialists can offer better treatment options," she said. "Why take chances? We're always here."

"We want the public to know that our specialists are here to provide not only life-saving advice, but information that relieves anxiety and give peace of mind," said Dr. Bayer, medical director of the poison center. "That's part of our job, too."

"As a matter fact," said Dr. McCormick, "one of our poison information specialists, Catherine Jahne [R.N.] is here because of a call she made to the poison center after her son ate some chrysanthemums. She was so impressed by the center, its staff, and its mission, that she ultimately became a poison information specialist herself and is now part of our team."

50 Years Ago

From *The Connecticut State Medical Journal*

April 1949

Recovery Hazards

In addition to the disease he is called upon to treat, the clinician is faced by the particular and peculiar problems of the person who has the disease. As if this were not enough to test the mettle of the the most proficient practitioner he must somehow manage the confusion and the fear aroused in the patient by modern clinical procedures. This aspect of the problem is more serious than is generally realized. Patients easily gain confusing, even fantastic, impressions which in some instances are followed by far reaching effect on the course of the disease, disorder or injury.

It is easy and natural for a patient to acquire a set of conflicting impressions. From the intern who takes the history and makes the initial physicial examination the patient receives those first impressions from what is said and done which are equally forceful whether they are implicit or explicit. From the nurse comes another group of impressions gained through her appearance, her expression and her efforts to be both enlightening and encouraging while being purposely vague. Then come the various laboratory technicians who in spite of the relatively impersonal nature of their work are sources of ideas, impressions and suggestions.

From the resident physicians, the visiting doctors and from the discussions amongst them come profound impressions which may be erroneous, bewildering, and frustrating. At long last having "suffered many things of many physicians" forceful patients put together all they have heard, seen, felt, and otherwise acquired and come out with what they think is the truth while it actually is false.

It is quite possible that no greater duty now faces the administrators of clinical medicine than to prevent the continued loading of unnecessary burdens upon sick and distracted people. The first obligation is for the doctor to understand the patient's disease, and on the same level of importance is the obligation to prevent him from obtaining false impressions which can so easily be converted into destructive suggestions.

How this is to be accomplished is urgent business. Perhaps, since nearly all of medicine now is on a group basis, formally or not, it may be necessary to take a group decision before the patient is given any information. Or it may be more practical to assign to the department head the responsibility of formally presenting the facts and the decisions to the patient. This would require not evasion by all other personnel but a deliberate building up of the prestige and oracular prowess of the person who is to speak the authoritative decisions of the group.

Such a plan should not be construed as infringing the rights of some nor as giving excessive authority to others, since the decisions would be the joint contribution of the whole group. It should, rather, be understood as giving to the patient the right he manifestly deserves which is the right to receive the full background and the details of his information from the most authoritative source there is. With this would go the right not to be confused by erroneous impressions.

Whether by this or another method it is important to prevent the tragedies which now so often unnecessarily burden patients. Only recently a consultant caused needless distress when he suggested in the patient's presence an explanation for the sciatic pain in total variance with what had previously been set forth. The patient's reaction was a mixture of anger, confusion and defeat. Nothing could be much more devastating for a chronic disorder.

Two cardinal rules need careful observance in whatever method is adopted. First, patients must not be put off with meaningless assurances which they usually see through and which, therefore, serve to arouse suspicion and heighten suspense. Second, patients and their families must not be told anything that does not conform with the truth. In presenting the truth it is essential to express it in terms

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Reprinted from the *Connecticut State Medical Journal*, April 1949.

UNIVERSITY OF MARYLAND, BALTIMORE

suited to the particular patient. Otherwise the most veracious statement may lodge in his mind as a falsehood. An educated young family in the upper income bracket recently were disturbed by what their physician had told them about their mother. The doctor said that mother's heart was decompensated and this in his opinion was not a serious situation. The family heard nothing except "decomposition" and they knew perfectly well that this was a serious thing and concluded they were being deliberately misled.

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75 Years Ago

From the *Proceedings of the Connecticut State Medical Society*

April 1924

The Connecticut Medical Women's Society

This Society met in New Haven, in October, 1923, and lunched at the Business and Professional Women's Club, of which Dr. Alice P. Ford is President. Informal talks were given by Dr. Maude W. Taylor, Hartford, on her work at the Industrial School for Girls, and by Dr. Kathryn M. Bryan, Norwich, on the State Farm for Women. Dr. Julia E. Teele reported the investigations as to rachitis at New Haven under Dr. Martha M. Eliot. Dr. Mary R. Lawson showed a most remarkable set of photographs which she had made of the plasmodia in the blood of a patient suffering from malaria and pernicious anaemia.

The mid-winter meeting was held in Middletown. The members visited the Middlesex Hospital in a body, after which a buffet supper was served at the home of Dr. Kate C. Mead. Following the refreshments a most interesting talk was given by Dr. Mary James, on the surgical and medical work in the Chinese hospital and out-patient department of the Episcopal Mission in Wuchang, China.

The annual meeting was held in Hartford, May 28th. Dr. Louisa Martindale, of London, England, was present and gave a valuable resume of the British Federation of Medical Women, and the advances they had made since the war in gaining positions in hospitals and medical schools, as well as in Boards of Health. Dr. Martindale was the guest of the American Medical Association at its sessions in Chicago, where she read a paper on "Deep X-ray Therapy in Fibro-Myomata of the Uterus."

The Society has thirty-eight members, all in good standing in their county associations. They hope that soon every hospital in this State will open its doors to women interns. The officers of the Society are:

Honorary President, Ellen H. Gladwin, Hartford.
President, Kate C. Mead, Middletown.
Vice-President, Alice P. Ford, New Haven.
Secretary, Jennie S. Chandler, Greenwich.
Executive Committee: Jessie W. Fisher, Middletown.
Maude W. Taylor, Hartford. Kathryn M. E. Bryan, Norwich.
Helen B. Todd, New London.

(The above information was furnished by Dr. Kate C. Mead, Middletown, President of the Society.—Editor.)

Acute Infections as a Cause of Critical Complications in Chronic Diseases

DR. GEORGE BLUMER, New Haven

Introduction.

The simultaneous occurrence of two diseases in the same patient is a well recognized possibility and a considerable number of papers recording such cases are to be found in the literature. The majority of these articles deals with the simultaneous incidence of two or more acute infectious diseases in the same patient, and there is in the literature at least one account of an unfortunate individual who had four simultaneous acute infections. This however, is not the aspect of the subject which interests us today. We are concerned with certain results which may occur when the subjects of chronic disease acquire acute infections. In fact our subject is even more restricted, for the effect of an acute infection in a patient suffering from a chronic disease is not always the same. There may be no untoward effects; there may actually be improvement of the chronic disease following the acute infection; or there may result some serious complication causing death, an exacerbation of the chronic disease or some non-fatal complication.

The purpose of this paper is to continue the work begun by Dr. Peters last year by pointing out that, not only in diabetes but also in cardiac disease, in nephritis and in certain other chronic conditions, a superadded acute infection is frequently a calamity— though not necessarily a fatal one.

It is a well known paradox, as Osler long since pointed out, that patients with chronic diseases seldom die of them. The reason for this is well shown in Flexner's paper on terminal infections which demonstrates that a considerable percentage of patients with heart and kidney disease die from either local or general bacterial infections. It is a matter of common knowledge that many patients with chronic disease acquire non-fatal infections and it is certain results of these that I wish to emphasize.

You will recall that last year Dr. Peters, in his admirable paper on "The Effect of Infection on Diabetes and Glycosuria," pointed out that not only might an acute infection possibly initiate a diabetes mellitus but that in known diabetics it frequently resulted in the development of diabetic acidosis. He reported several instances of bacterial infections apparently responsible for the development of ketosis and I will simply add one more to emphasize the points he made and to show that other forms of infection may have a like result.

I saw with Dr. R. G. Tracy in 1922, R. W. a girl of 7 and a known diabetic of at least 7 months' standing with a rather severe type of the disease. She had improved under diet, but had never become sugar free. July 1st she developed coryza and the following day a typical measles rash appeared. July 3d she became drowsy, with vomiting and labored breathing and, when seen, had marked air hunger, with a breath smelling faintly of acetone and with well marked ketonuria. She recovered under appropriate treatment and survived until the discovery of insulin under which she markedly improved and is still alive and in good condition.

Heart Disease.

The effect of infections, often of a rather trivial character, on chronic heart disease has not, it seems to me, received the attention which its importance demands. The possibility of reinfection of diseased valves, most apt to occur from certain local foci, is pretty well recognized, but the relationship between acute infections and heart failure has not been sufficiently emphasized. I will briefly summarize two cases in point:—

W. K. a farmer, aged 69, was admitted to the New Haven Hospital April 18th, 1923, complaining of cough, dyspnoea and swelling of the legs. These symptoms followed an attack of upper air passage infection with moderate fever, cough and profuse expectoration lasting 5 weeks. Examination showed an enlarged irregular heart with gallop rhythm at the apex, an enlarged liver, the sign of bronchitis and congestion at the bases of the lungs and oedema of the extremities. A diagnosis of arteriosclerotic heart disease with congestive failure was made. The patient improved, the rales at the bases and the enlarged liver disappeared, and he was discharged improved only to return again a month later with the same picture which again followed an attack of bronchitis with bronchopneumonia.

In a second case, recently observed, a woman of 62 had been in her usual health till Christmas time of 1922 when she had an attack of acute bronchitis which was so mild that she was not even in bed. Immediately after this she complained of palpitation and a weak feeling in the cardiac region with some dyspnoea. Examination showed absolute irregularity of the pulse and slight signs of congestive heart failure. She improved during the summer of 1923 but January of this year had a second attack of bronchitis since which time she has been more dyspnoeic and has felt weak. Examination showed an old mitral disease with an enlarged heart and auricular fibrillation. The pulse was known to have been regular before the first attack of bronchitis.

In these cases, and many similar ones could be cited, we have pretty conclusive evidence that an acute infection, even though trivial, in a patient with preexisting cardiac disease, may result in heart failure either from injury to the heart muscle itself or from damage to the conducting system. Lack of time does not permit the indefinite quotation of cases, but others could be cited showing that not only heart failure with or without fibrillation, but also partial or complete heart block may follow an acute infection in a previously diseased heart and this not only in the subjects of the hypertensive and senile types of cardiac degeneration but also in those with rheumatic heart disease.

Diseases of the Blood-forming Organs.

The detrimental effect of infection on the chronic diseases of the blood-forming organs has been noted a number of times.

Lowy cites two such cases: (1) a patient with lymphatic leukaemia in whom, following an attack of erysipelas of the arm, the leucocytes rose from to 35,000 and the mononuclears from 5,500 to 36,000 per cubic millimeter, and (2) a patient with pernicious anaemia in whom a drop in the red blood corpuscles from 1,120,000 per cubic millimeter to 360,000 per cubic millimeter was associated with a fatal attack of dysentery.

Other Chronic Conditions.

It is not my purpose to continue the citation of chapter and verse for this would involve an almost endless repetition of similar incidents and a paper such as this should be stimulating rather than soporific. I would point out, however, that I have by no means exhausted the catalogue of chronic diseases which may be adversely influenced by acute infection. I need but recall the exacerbations of a chronic nephritis which may follow a tonsilitis or an erysipelas or the detrimental effect which an acute infection may have on a patient with hepatic cirrhosis. Still another aspect of the subject is the exacerbating effect which an acute infection may have on a chronic one, well illustrated by the disastrous effect of influenza in lighting up latent pulmonary tuberculosis or syphilis of the central nervous system.

Prophylactic Suggestions.

The moral of this tale is only too evident. Having in mind the dangers which threaten the patient with a chronic disease on the incidence of an acute infection, we must do all in our power to prevent such an occurrence. This involves the eradication of all obvious foci of infection in patients with chronic disease during periods of relative good health. The removal of abscessed teeth and diseased tonsils, the active treatment of infected paranasal sinuses or chronic middle ear infections and the building up of the resistance by general hygenic measures such as diet, rest, and proper regulation of the emunctories must be carried out. Patients with chronic disease should be warned of the dangers attending acute infections, they should be cautioned to avoid exposure in crowded street cars or other public gatherings and they should be advised that even slight infections are to be treated with respect and combated by rest in bed until all danger has passed.

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DISCUSSION

DR. ORIN R. WITTER, Hartford: The breadth of suggestion brought out by Doctor Blumer's paper is not appreciated at the first glance. Two points stand out:

First, intensive diagnostic examinations upon all patients coming under our care. Second, the intensive treatment of all infections, regardless of apparent severity. The cases quoted of diabetes, arteriosclerotic heart disease with hypertension, myocarditis with decompensation or auricular fibrillation, the leukaemias and anaemias, are all conditions which may escape recognition if our examinations are made incompletely.

As shown by these cases, acute infections render such of these cases of chronic disease a critical situation. For the benefit of our patients, then. the lesson I would draw from these cases is the routine examination of patients for the recognition of chronic disease. The insurance examinations, the industrial examinations, the Life Extension Institute examinations and examinations of other companies of this nature all meet this routine examination to a certain extent. Certainly the physicians should stand ready to render such routine examination, and by so doing in recognizing chronic disease and guiding in its care, we may render an inestimable service to the public. Much has been written in the American Medical Association Journal, urging physicians to give the opportunity of such service to their patients. Intensive diagnostic examination, then, with the protective policy of guidance for the remedy or care of physical defect, will render acute infections less dangerous.

Under the second heading, intensive treatment of acute infections, the strenuous life of to-day requires and demands the least possible disability from illness, and intensive treatment not only cuts down this disability period, but lessens the danger to all such patients as have chronic conditions.

If we can then gain from Doctor Blumer's paper the thought of thorough diagnosis and guidance in care as protection against the effects of chronic disease, eliminating such conditions or factors intensifying the same, and institute intensive treatment of all acute infections encountered, we have greatly increased the value of our service rendered to the many patients who may be ignorant of their chronic incapacity, or who are living in the belief that such chronic disease is but of little menace to their future life.

HEALTH SCIENCES LIBRARY UNIVERSITY OF MARYLAND, BALTIMORE

What's Wrong With This Picture?

I recently received a solicitation in the mail for my group to join the Connecticut Hospital Association (CHA) as a Type VI member (physician group practices). Membership dues are $200.00, yearly, per group. Included was a list of the 44 practices, which currently belong. Members of some of those groups are very prominent physicians within organized medicine in the State of Connecticut. As my 12-year-old daughter would ask, "What's wrong with this picture?"

Is the perception of organized medicine in Connecticut so skewed that our own leaders are looking to the hospitals for structure? Conversely, does the CHA see something so disturbing in its own future that it feels the need to have physician affiliates?

Knowing how many legislative reports the CSMS has sent out this year, it is incredible to me that there are physicians who do not know that the CHA, this year, has launched an assault on the practice of medicine. The CHA is pushing for a bill in the General Assembly that would require physician practices to have the same Certificates of Need (CON) for capital expenditures that the hospitals must have. Many of the physician groups which belong to the CHA would be directly disadvantaged by the passage of this bill. Even state legislators in the committee hearing recognized that this is a naked anti-competitive move by the hospitals. Why do physicians pay dues to an organization that is lobbying for a bill that will cost them dearly?

Those of us who have not succumbed to the blandishments of the CHA must not be too smug, though. The fact that groups have joined means that we must take a hard look at the services we provide to physicians at all levels within organized medicine. As I have said in the past, the practice of medicine is no longer a cottage industry. The days of solo and small group practices being the dominant mode of delivery are quickly ending. It is incumbent on us, the leaders of the medical societies, to learn to relate to physicians both as individuals and as corporate entities.

It is ironic that many of the services provided to physician groups by the CHA are also available to them both through the CSMS and its affiliate, M.D. Advantage. The few services offered by the CHA and not by organized medicine are easily duplicated. One of the services offered by the CHA, legislative advocacy, would be laughable if physicians weren't signing up for it. Who do the groups think the CHA lobbyists are going to represent on the CON bill? Here is a hint. If you are in the market for radiology, laser, or other big-ticket medical equipment, it won't be you.

At its last meeting, the Council of the CSMS voted to convene a meeting of physician executives of group practices to begin the process of attempting to keep physicians and their groups within the fold of the state and county medical societies. Frank discussion is essential and each party must be willing to learn from the others.

In the meantime, if your group is considering joining the CHA, please ask yourselves if hospitals in this state or any other have ever put physician interests in front of their own. In business matters, the hospitals' priorities are the hospitals themselves and rightly so. In business matters, physicians' priorities should be the physicians themselves. We should not subjugate ourselves to anyone, hospitals and the government included. Physicians and hospitals must deal with each other out of strength and mutual respect. When we do so, we can both truly focus on our mutual priority, the patient. No relationship can succeed when one partner attempts to dominate the other. Ask yourself, "Why is the Connecticut Hospital Association poaching for members among the physicians' ranks?"

Craig W. Czarsty, M.D.
President

REFLECTIONS ON MEDICINE

Welcome to the New Editor

ROBERT U. MASSEY, M.D.

A commendable tradition among editors is for the passing editor to introduce his successor when the watch changes, in short to say *Ave et vale* ! In the confusion of the Christmas season, I failed to do that, and although Dr. Crombie's editorial watch is well underway, I shall attempt belatedly to remedy that failure.

First, I wish to express my gratitude to the Society and to the staff for their tolerance and support during my more than 12 years of messing around in the editorial office. Apart from practicing medicine, playing at being editor is the best job I know. As I reflect on the pleasure I took in it during those years, I recall Rat's comment to Mole in Kenneth Grahame's *The Wind in the Willows:* "Believe me my young friend, there is *nothing*—absolutely nothing—half so much worth doing as simply messing about in boats. Simply messing,..." I could say that about boats, editorial offices, and hospitals, really in no special order, varying with my mood and the circumstances! When I agreed to the editorial job in 1986, I had just accepted an appointment as editor of the *Journal of the History of Medicine and Allied Science*, a position that I held along with this one for the next four years, immersed in manuscripts, copy-editing, and the tough decisions editors have to make. At that time Vivian Feriola, who died in the summer of 1991, was the capable managing editor of *Connecticut Medicine*, and Theo Ungewitter, my secretary at the School of Medicine, filled a similar role for the *Journal of the History of Medicine.* My daughter, Janet Massey, was proof-reader for both, occasionally critic and copy-editor, and so far remains proof-reader for *Connecticut Medicine.* My thanks to all of them.

I thank Tim Norbeck and all of his good staff for their enthusiastic support and good cheer and their making allowance for what editors sometimes arrogantly claim as special prerogatives. One-sixty St. Ronan Street is a fine place to work. I especially thank Wanda Jacques-Gill, managing editor since 1991, for the capable, cheerful way in which she month after month put the Journal together, put up with me, handled the correspondence, set up the budget, negotiated with the printer, and skillfully handled the innumerable phone calls and visits, most but not all of them friendly. I am grateful to the CSMS officers for their support for the Journal, and to the Board of Editors for their critical reviews of manuscripts and their wise advice to me. Especially I am grateful to our literary editor, Dr. Shep Nuland, for his support and for his rescue work in protecting me more than once from shooting myself in the foot.

Second, and more to the point, it is a pleasure to welcome our new editor, H. David Crombie, M.D., who came on board on 1 January. Dr. Crombie is a distinguished surgeon, a medical ethicist, an old friend of more than two decades, a former editor of the *Hartford Hospital Bulletin,* as well as *Surgical Byline.* We have served together, he as librarian, I as associate librarian, for many years with the Hartford Medical Society. We have been colleagues in medical education, ardent amateur medical historians, and co-editors of a prize-winning *History of the Hartford County Medical Association* in 1992, that Association's 200th anniversary. He shares my conviction that even in this information age state medical journals have substantial tasks to perform. They provide an opportunity for resident physicians to begin to build their bibliographies, for practicing physicians to present their work to their colleagues, for academic physicians to communicate with neighboring practitioners, for the poets and story-tellers among us, and for friends and colleagues to comment on our profession in these turbulent and perilous times. *Connecticut Medicine* reports the meetings and other activities of the State Society, provides a way for the officers and members to keep in touch, and, perhaps most important, it accumulates month by month a historical record of medicine in this corner of North America.

Dr. Crombie in the February issue listed his objectives for the Journal. They are exactly right for *Connecticut Medicine*, especially his fourth goal, "The Journal will encourage dialogue via letters, commentaries, reflections,..." We have some tough-minded, thoughtful physicians in our communities, medical societies, hospitals, and the two medical schools, some of the best in the country. The Journal should hear from them! My prediction is that medical care changes in the next decades will come state by state; brain power in Connecticut is sufficient to set the pace, and *Connecticut Medicine* should provide the forum, and keep the minutes!

David, may you cherish your years with the Journal as I have mine.

ROBERT U. MASSEY, M.D., Professor Emeritus, Division of Humanistic Studies, Department of Community Medicine and Health Care, University of Connecticut School of Medicine, Farmington.

This Month's Reading in Review

TIMOTHY B. NORBECK

"In the patients' rights debate, there is no issue more pressing than the question of who determines the 'medical necessity' of patient care. Historically, most private insurers and third-party payers have viewed medical necessity as health care provided according to the prevailing standards of medical practice.... Today, this standard is increasingly challenged by health plans that determine medical necessity primarily in terms of financial considerations. If health plans define medical necessity, the patient appeals process will be seriously undermined, if not meaningless."

Remarks of AMA House of Delegates Speaker,
Richard F. Corlin, M.D., to the Senate Committee
on Health, Education, Labor and Pensions.
AMA Release (2 March 1999)

"No amount of procedural protection can help patients if insurers are given broad power to determine what standards will be used to make decisions about coverage. Such protection would be an instance of winning a battle and losing the war."

Law professor Sara Rosenbaum on the "medical
necessity" debate.
Business & Health (March 1999)

Putting A Price on Your Doctor's Head

"Such an approach is fitting for a fight against Mafia soldiers and neighborhood drug dealers, not your personal physician. The tactics remind us of how the 'old' IRS abused honest citizens who happened to get on their 'enemies list.' And the government's strangely angry anti-physician rhetoric is certain to play to the very worst fears of many older and ill patients who are especially susceptible to emotionalism and manipulation.

This ill-conceived and reckless strategy drives a wedge between patient and physician, jeopardizing the special relationship of trust that is at the heart of American medicine. How can a patient and physician comfortably come together in this intimate relationship when the government is offering a reward for the patient to 'drop a dime' on the doctor?"

AMA President Nancy Dickey, M.D., in an
OP-ED complaining about the aggressive campaign of the federal government and AARP
to urge Medicare patients to report suspected
fraud in return for a $1,000 bounty.
Wall Street Journal (24 February 1999)

No, Not Our Federal Government!

"After a two-week hearing in January in Washington, D.C., outraged federal judge Royce Lamberth threatened to hold two Cabinet secretaries, Interior's Bruce Babbitt and Treasury's Robert Rubin, in contempt of court for failing to turn over records of federal trust funds held for Native Americans—records that Lamberth originally ordered released in November 1996. Among the excuses offered by the two departments is that a federal records depository in the Southwest is contaminated with rat droppings, and researchers will not enter it because of the fear of the deadly hantavirus."

News of the Weird (12 March 1999)

The HMO industry, which is being pummeled in the patients-rights debate, wants to change the subject to one it hopes will pay both political and financial dividends: Medicare.... In a bid to bolster government reimbursements for Medicare HMOs, the American Association of Health Plans (AAHP) is kicking off a national effort to recruit senior citizens to plead its case with decision-makers.... The group, which represents health-maintenance organizations and other managed-care plans, is warning the elderly that reduced government payments could lead additional HMOs to scale back extra benefits or drop out of Medicare entirely.

Wall Street Journal (15 March 1999)

"HMOs want to have it both ways. For years, they claimed they'd be less expensive and more efficient than traditional Medicare. Now, when their feet are being held to the fire on this, they aren't happy about it."

Marilyn Moon of the Urban Institute,
on the above AAHP national effort.
Wall Street Journal (15 March 1999)

Only in America: In January, the Saguaro High School (Phoenix, Arizona) newspaper editor, Sam Claiborn, wrote an editorial critical of the culture of violence of football heroes, who he said often turn out to be drunks and spouse-abusers.... An unnamed member of the school's football team took offense and beat Claiborn up, and later was suspended for the attack.

Chuck Shepherd (12 March 1999)

TIMOTHY B. NORBECK, Executive Director, Connecticut State Medical Society.

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The Society maintains the Physician Placement Service as a *free* service to the medical profession, hospitals, and communities in Connecticut.

***Opportunities* should be typed, double-spaced copy on letterhead and submitted to CSMS, Physician Placement Service, 160 St. Ronan Street, New Haven, CT 06511 (203) 865-0587 or fax to (203) 865-4997. These will be published as space permits and will be distributed to physicians inquiring about such *opportunities*.**

***Physicians wishing to locate* in Connecticut may call the office requesting opportunities in their specialty. Also, candidates are invited to submit a resume to be kept on file with the Society. An announcement of a physician's availability will be published in two issues of *Connecticut Medicine* as space permits.**

Listing of physicians in the Placement Service does not in any way represent certification by the Society. Investigation of credentials and experience is the responsibility of those seeking applicants for positions.

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Treating the "Millennium"

AMNews 5 April 1999 Commentary excerpt... To help you determine your own state of readiness, I highly recommend the manual used in these simnars, "A Year 2000 Problem Solutions Manual," which provides practical information, such as a checklist of what physicians need to know and to be responsible for concerning the Y@K problem. The manual is available to members free of charge (for nonmembers the price is $100 and is also available in a downloadable version from the Members-Only section of the AMA's Y2K Web site. this site (http://www.ama.assn.org/not-mo/y2k/index.htm) will have regularly updated information about Y2K and assistance with Y2K problem-solving.

In addition to accessing the AMA Web site for information, you also can turn to AMNews and the Journal of the American Medical Association. Both publications will continue to featue articles discussing the Y2K problem, survey results, patient safety concerns, reimbursement issues and other ralated matters.

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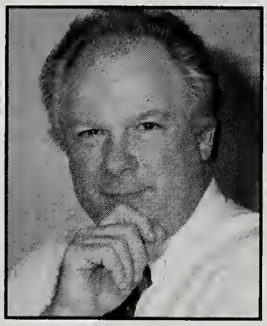

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Intrapericardial Caval Injury Due to Blunt Trauma

GEOFFREY L. FEY, B.S., MICHAEL M. DEREN, M.D., AND JOHN H. WESOLEK, M.D.

ABSTRACT—*Background:* Report of diagnosis and treatment of intrapericardial vena caval injury caused by blunt thoracic trauma, an unusual cause of cardiac tamponade.

***Methods:* A 43-year-old male motor vehicle accident victim suffered a lacerated intrapericardial inferior vena cava leading to cardiac tamponade. Positive clinical findings were hypotension and tachycardia without indication of external chest trauma.**

***Results:* Abdominal computed tomography was negative, but ultrasound demonstrated cardiac tamponade and fluid in the abdomen. Pericardiocentesis was performed, and nonclotted blood was aspirated. Laparotomy showed intra-abdominal blood and splenic capsule avulsion. Sternotomy revealed a laceration of the inferior vena cava, which was repaired.**

***Conclusions:* Signs of cardiac tamponade and a history of blunt thoracic trauma caused by deceleration injury suggests intrapericardial inferior vena cava injury. Median sternotomy is the optimal choice for caval repair.**

Introduction

THORACIC injuries are responsible for up to 25% of trauma deaths.[1] Blunt trauma, such as that seen in deceleration injuries due to motor vehicle crashes, can lead to significant cardiac injuries. The most common is blunt cardiac trauma, of which a major complication is arrythmia. Major vessel injury is also possible, most often the thoracic aorta. Blunt trauma resulting in inferior vena cava (IVC) injury is a rare but serious occurrence. Roughly one-half of patients who have incurred blunt IVC trauma die before reaching the hospital, while between one-third and one-half die in spite of resuscitative efforts and early operation.[2–8] In addition to difficulty in diagnosing such cases, a major reason for the observed high mortality is the lack of standardized treatment for this injury.[9–10] Here we report a case of intrapericardial laceration of the inferior vena cava caused by blunt trauma during a motor vehicle accident.

Case Report

A 43-year-old unbelted male driver collided with a utility pole and was ejected from his vehicle. Past history was unremarkable except for known alcohol abuse. Upon arrival at the emergency department, he was alert, oriented, and complaining of excruciating right hip pain. Blood pressure was 120/50 mmHg, with a pulse of 102 beats per minute and respiratory rate of 19 per minute. Glasgow coma scale score was 15. The only other abnormal physical finding was foreshortening and internal rotation of the right leg. Laboratory findings included a hemoglobin of 15.8 and a blood alcohol level of 0.139. Chest, cervical spine, and pelvis roentgenograms were negative. An abdominal computed tomography (CT) scan was negative.

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An attempt to reduce the patient's right hip dislocation was unsuccessful. He then became progressively hypoxic and acidotic. An arch angiogram was negative.

Over the next several hours the patient became tachycardic and hypotensive. Echo of the heart showed cardiac tamponade and free fluid was observed in the abdomen. Pericardiocentesis was performed, with aspiration of 300 cc of blood. The patient's blood pressure then rose from 60 to 90 mmHg and he was immediately transported to the operating room for exploratory laparotomy followed by median sternotomy. At laparotomy, two liters of blood and an avulsion of the splenic capsule were found, necessitating splenectomy. At sternotomy, a 1 cm laceration of the inferior vena cava at the right atrial junction was discovered and repaired.

After surgery the patient initially stabilized such that on the fourth postadmission day he underwent uneventful right bipolar total hip replacement.

Unfortunately the patient's condition slowly deteriorated due to progressive liver failure, adult respiratory distress syndrome, and eventual multisystem failure. The patient expired on postadmission day 10.

Discussion

Blunt traumatic injury to the intrapericardial inferior vena cava is a rare but serious condition that is associated with a high mortality, even with early recognition and treatment.[11] Approximately 50% of patients having this type of injury die before reaching the hospital, and nearly 50% expire with treatment. Death can occur by cardiac tamponade or, if the pericardial sac is perforated, by exsanguination.

According to Bright and Beck[12] and Parmley et al,[13] blunt injury to the intrapericardial IVC can be caused in a variety of ways, among which is rapid deceleration injury. This can result in intrapericardial vena cava disruption because the heart is displaced anteriorly against a vena cava fixed by the diaphragm.[14] Our patient was unbelted and likely experienced such an injury when he was ejected from his motor vehicle. Many patients with this type of injury exhibit evidence of external chest trauma. However, the only indication of external injury in this case was a right hip dislocation. There was no evidence of external thoracic injury. In addition, many victims of blunt trauma with IVC laceration/avulsion are in profound shock, whereas our patient on arrival in the emergency department only had an elevated heart rate. In this case, laceration of the IVC was only partial. Complete transection of the IVC is almost invariably fatal.[15–18]

Eventual hypotension and tachycardia were the prime indications that cardiac tamponade was present. The fact that the patient's pericardium remained intact prevented more extensive blood loss, thus allowing increased time for making a diagnosis. Subsequent pericardiocentesis aided in stabilizing the patient's hemodynamics and median sternotomy allowed discovery and repair of the lacerated inferior vena cava.

Conclusions

The presence of signs of cardiac tamponade, in conjunction with a history of blunt thoracic trauma caused by deceleration injury, should suggest the possibility of intrapericardial inferior vena cava laceration/avulsion. As exemplified in this case, these signs are not always apparent, especially initially. It is important to realize that cardiac tamponade may be insidious and echocardiography should be considered when there is delayed, progressive hemodynamic deterioration. Median sternotomy is essential to elucidate and treat the vessel injury.

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Left Atrial Myxomas Presenting with Right Hand Weakness

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ABSTRACT—A 63-year-old man with multiple left atrial myxomas presenting with right hand weakness is described.

Two-dimensional echocardiography obtained during the evaluation for his stroke showed a large left atrial mass. At surgery, two separate left atrial myxomas were excised. Pathology confirmed the diagnosis.

Although left atrial myxomas are uncommon, they should be included in the differential diagnosis of stroke, especially in patients who present without cardiovascular or cerebrovascular risk factors. The absence of cardiac symptoms and signs does not rule out a cardiac myxoma.

Introduction

CARDIAC myxoma is a benign tumor of the heart most commonly found in the left atrium. It usually presents as a classic triad of valvular obstruction, constitutional symptoms and embolism. Definitive diagnosis of cardiac myxomas requires cardiac imaging studies, with two-dimensional echocardiography the technique of choice. Here we report the diagnosis and management of a patient with multiple left atrial myxomas who presented with the sudden onset of right hand weakness.

Case Report

A 63-year-old man presented to the emergency department with the sudden onset of right hand weakness which developed while watching television 12 hours prior to admission. He did not experience loss of consciousness, headache, or any other gross motor, sensory, or speech abnormalities. He denied chest pain, dizziness, and dyspnea. His medical history was remarkable for a retinal detachment five years prior to admission. Otherwise, he had no medical complaints. He took no medications, including over-the-counter drugs.

At the time of admission, the patient was conscious and afebrile, with a blood pressure of 130/68, a regular heart rate of 79 beats per minute, and unlabored respirations at 18 breaths per minute.

Head examination did not show scalp tenderness. Carotid pulses were symmetric without evidence of carotid bruits. Pupils were 2mm, round and reactive. The extraocular motions were intact. The fundi were clear with distinct disk margins. The lungs were clear. The heart was in regular rhythm. S1 and S2 were normal, and there were no extra heart sounds, rubs, gallops, or murmurs in different positions. The abdomen was benign. Both upper and lower extremities had intact and symmetrical pulses without bruits.

Neurological evaluation showed right pronator drift and right hand intrinsic muscle weakness with a muscle power of three out of five (compared to left side of five out of five). Other neurological examinations were unremarkable. The blood chemistry profile was normal. The CBC showed a white blood cell count of 6.9 with a normal differential, hemoglobin 14.8g/dL, and platelet count 321,000. The serum glucose was 86mg/dl, the cholesterol

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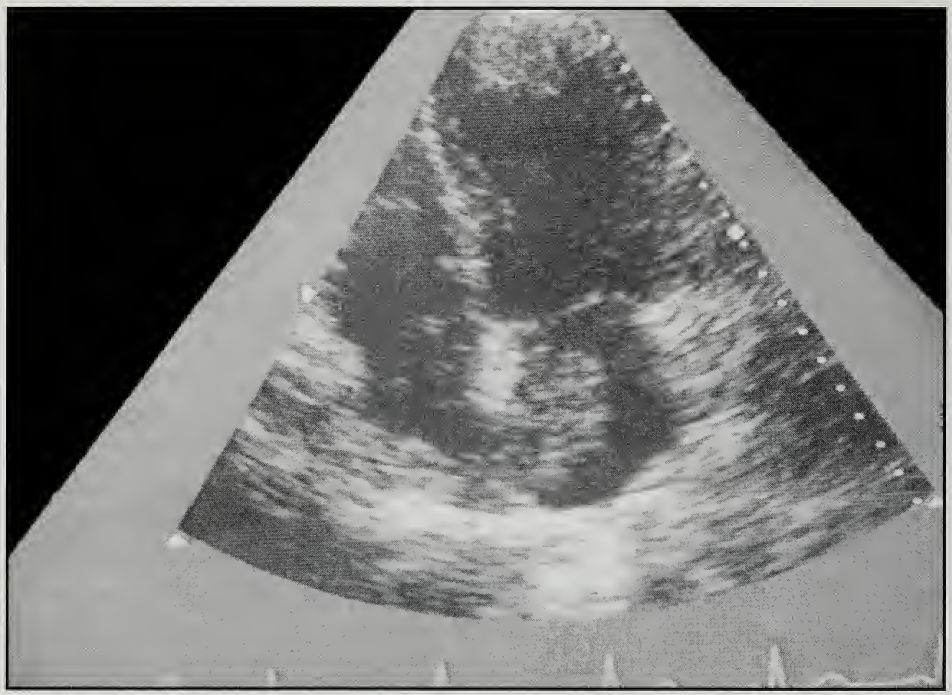

Figure 1.—Two Dimensional Echocardiography (Apical View) of Left Atrial Myxomas. In diastole, the tumor, which protrudes from the left atrial septum, is 4.3 x 4.3 cm in diameter as single mass.

178mg/dL, and triglycerides of 110mg/dL. The electrocardiogram showed normal sinus rhythm with a normal pattern.

Computed tomography (CT) scan and magnetic resonance imaging (MRI) of the brain showed no evidence of hemorrhage or acute cortical infarction. Carotid doppler showed normal pressures and no hemodynamically significant lesions. A two-dimensional echocardiogram showed a large left atrial mass adherent to the intra-atrial septum. The mass was measured in the long axis as 4.3 x 4.3cm (Fig. 1). No atrial or ventricular thrombi were seen. Cardiac catheterization revealed normal coronary arteries but confirmed the presence of a left atrial mass.

The patient was transferred to the operating room for surgical excision. During the operation, two separate left atrial myxomas were observed. The first myxoma completely occupied the interatrial septum. The second one was located on the roof of the left atrium and extended several millimeters onto the anterior mitral annulus. Both myxomas were large and friable. No thrombi were observed on their surfaces. The myxomas were excised including full thickness left atrium. Hemashield patch reconstruction of both left and right atria was performed. The patient recovered without complications and was discharged home five days after surgery. The pathology of the specimen confirmed the diagnosis of cardiac myxomas (Fig. 2). Discharge plans were made for the patient to be followed up with two-dimensional echocardiogram semi-annually to monitor for possible recurrence.

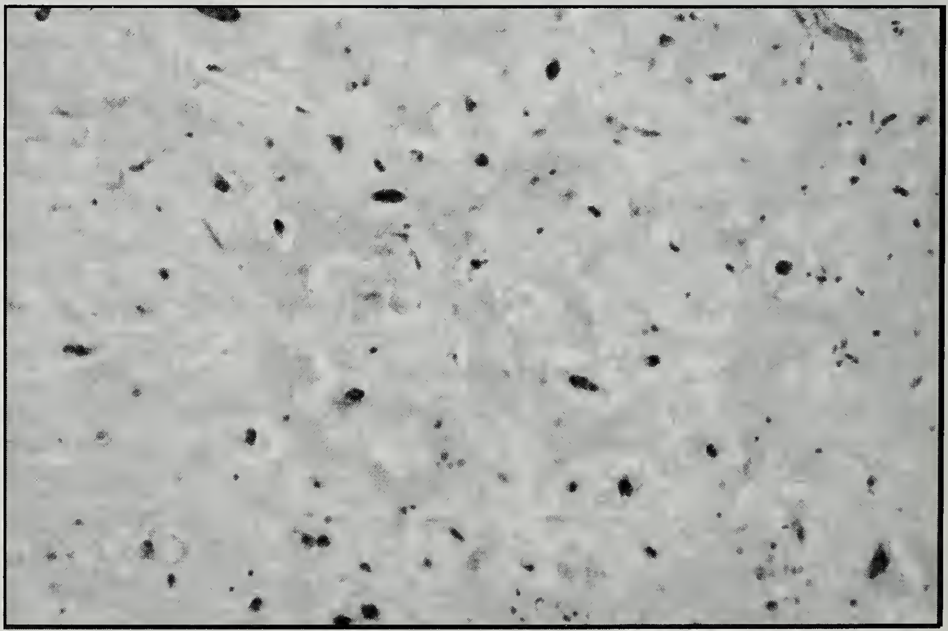

Figure 2.—Histologic section of myxoma. The tumor has an abundant myxomatous stroma, scattered with undifferentiated mesenchymal cells (Hematoxylin and eosin, original magnification x 250).

Discussion

Ischemic stroke and infarction constitute 85% to 90% of cerebrovascular diseases in western countries. About 20% to 40% of ischemic strokes are caused by emboli, which in most cases are derived from the heart.[1] The cardiac causes of emboli include, left atrial or ventricular thrombus, rheumatic mitral valve disease, bacterial endocarditis, atrial or ventricular aneurysm, dilated cardiomyopathy, and cardiac myxoma. Cardiac myxomas should be included in the differential diagnoses in patients with central nervous system (CNS) symptoms or signs consistent with new strokes, especially when they lack cerebrovascular or cardiovascular risk factors.

Myxoma is the most common primary cardiac tumor (30% to 50%).[2] About 75% of cardiac myxomas are derived from the left atrium, 20% are derived from the right atrium, and the other 5% are derived from ventricles.[3–6] Myxomas are usually single, and multiple tumors in one or multiple chambers are very unusual.[3–6] Multicentric cardiac myxomas may be a component of a multisystem complex or a genetic disorder, of which the mode of inheritance has not been determined.[2,7–8]

Cardiac myxomas can be either asymptomatic[9] or symptomatic.[3–6] The symptoms caused by a cardiac myxoma usually present as a classic triad of obstructive, embolic, and constitutional symptoms or a combination of these. The obstructive effects, which account for symptoms in 50% to 90% of patients, are due to the obstruction of blood flow across atrioventricular or semilunar valves by myxomas.[3–6] This may manifest as either evidence of valvular stenosis or insufficiency. The only unique cardiac sign of left atrial myxomas may be the "tumor plop," which is heard in 20% of patients.[10,11] The severity of the obstructive symptoms and signs usually is related to the size of the tumor.[12] The patient we report did not show any symptoms or signs of mitral valve stenosis or insufficiency, even though the myxomas were large. The absence of cardiac symptoms or signs does not rule out a cardiac myxoma.

Embolic symptoms and signs occur in 20% to 45% of patients with cardiac myxomas.[3–6] The emboli, in most cases, are myxoma fragments, even though they can also be thrombi or a combination of both.[13] The emboli can go to any arterial bed. About 50% of emboli from the left atrium go to the CNS.[14–18] The emboli cause tissue damage by two main mechanisms; direct occlusion of the blood vessels, or formation of aneurysms.[10,13] In rare cases, myxomas can metastasize.[16–18]

Neurological symptoms and signs caused by cardiac myxomas include stroke, seizures, and nonspecific neurological symptoms.[14–16] Presenting symptoms and signs include hemiplegia and hemiparesis, unconsciousness, aphasia, visual disturbances, impairment of intellectual function, headache, central facial paresis, ataxia, sensory dysfunction, cerebral convulsions, depression, and psychiatric disorders.[15] Myxoma emboli to the CNS can also present as a localized peripheral motor abnormality, as in the case reported here.

Definitive diagnosis of cardiac myxomas requires cardiac imaging studies. Currently the most reliable and cost-effective technique is the two-dimensional echocardiography.[14,19,20] Transesophageal echocardiography may offer even more accurate preoperative and intraoperative assessments of myxoma.[21,22] The two-dimensional echocardiogram may not be able to determine the tumor numbers when the tumor sizes are large, as in the case we report here. CT and MRI are not indicated in most cases, unless local invasion of the myxomas to the myocardium, chest wall, or mediastinum is suspected.[10,23] Cardiac catheterization is recommended in patients over 40 years of age to rule out coronary artery disease, or when noninvasive techniques prove inadequate.[10,13]

The potential sudden devastating nature of both cardiac and noncardiac complications mandates prompt surgical removal of cardiac myxomas once the diagnosis is made.[10,13] Because myxomas can be multicentric, direct visualization of all four chambers via a bi-atrial surgical approach may be necessary.[10,22,24,25] The rate of myxoma recurrence after surgery has been reported to be 5% to 14%,[4,5,13,14,21] which is highest in patients with multiple myxomas.[2,13,14] This may be due to the multicentric origin of myxomas, and not to the recurrence of resected tumors.[13,14] Semiannual two-dimensional echocardiography should be performed in all patients after resection.[10]

In summary, cardiac myxoma is a rare benign tumor of the heart with a predilection for the left atrium. It usually presents as a classic triad of valvar obstruction, constitutional symptoms, and embolism. Diagnosis is made by two-dimensional echocardiogram. Cardiac myxomas should be surgically removed promptly in order to prevent cardiac and noncardiac complications. Although the incidence of left atrial myxoma is very rare, it should be included in the differential diagnosis of stroke in patients without cardiovascular or cerebrovascular risk factors. The absence of cardiac symptoms and signs does not rule out a cardiac myxoma.

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Clinical and Laboratory Evolution of a Culture-Confirmed Case of Human Granulocytic Ehrlichiosis

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ABSTRACT—A 74-year-old man from suburban New York City, who was hospitalized because of chest pain and fever, was diagnosed as having human granulocytic ehrlichiosis on the eighth hospital day. Although leukocyte and platelet counts were normal on admission, they fell to abnormally low values then normalized prior to specific therapy against the human granulocytic ehrlichiosis agent. Intracytoplasmic inclusions suggestive of *Ehrlichia* were observed in up to six percent of granulocytes, and the human granulocytic ehrlichiosis bacterium was cultured in an HL 60 human promyelocytic cell line. The patient improved dramatically within 24 hours of doxycycline treatment, after failing to improve on various beta lactam antimicrobial agents. He was discharged from the hospital 14 days after admission.

Because human granulocytic ehrlichiosis was not diagnosed until his eigth hospital day, clinical and laboratory parameters prior to specific treatment were available. This case illustrates the clinical and laboratory evolution of the infection with human granulocytic ehrlichiosis agent in humans.

Introduction

An illness attributable to *Ehrlichia* infecting human granulocytes was first described in 1994 in 12 patients from the upper Midwest United States[1] and subsequently in patients from other areas of the United States.[3–6] The agent of human granulocytic ehrlichiosis (HGE) is believed to be transmitted by the bite of Ixodes scapularis ticks.[7]

The case described herein represents one of the first patients from whom the HGE agent has been isolated in continuous cell lines. Since our patient was hospitalized within 24 hours of appearance of symptoms and had no specific treatment for HGE for seven days, the clinical course and laboratory parameters during this period were available for evaluation. We believe that this in-depth analysis may provide insights into the natural clinical course and evolution of laboratory parameters associated with this emerging infectious disease. Microbiological characteristics of this patient's HGE isolate have been previously reported.[8]

Case report.—A 74-year-old man from Westchester County, New York was admitted to the Westchester Medical Center on 9 November 1995 because of fever, malaise, and chest pain of approximately 24-hours duration. Three weeks earlier he had a similar episode of chest pain. At that time, an exercise tolerance test showed

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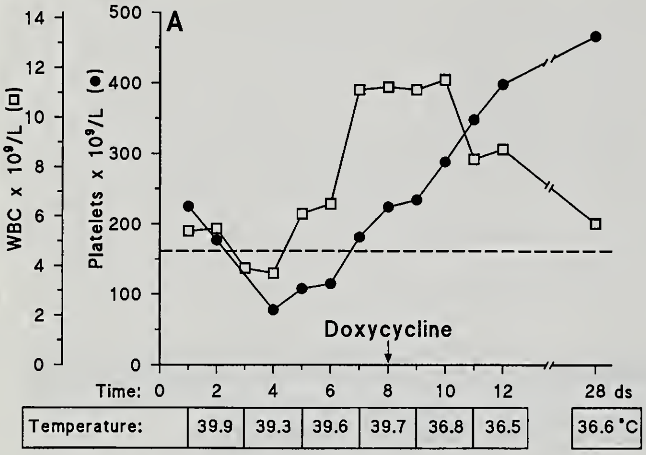

Figure 1A.—Daily leukocyte and platelet counts are shown. The dashed horizontal line corresponds to the lower limit of the normal range for leukocyte (4.6x10^9/L) and platelet (160x10^9/L). Doxycycline treatment was started on the eighth hospital day. Maximal daily temperature (°C)is depicted at the bottom of the graph.

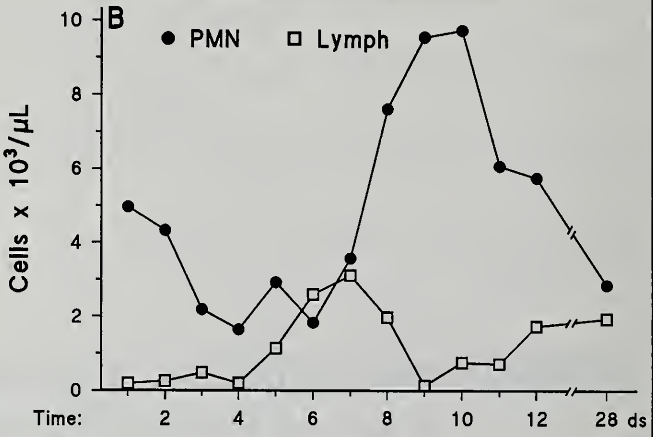

Figure 1B.—Daily polymorphonuclear neutrophil (PMN, lower limit of normal range 2.0x10^3/μL) and lymphocyte counts/μL (lower limit of normal of 1.5x10^3/μL). PMN gradually declined during the first seven days. Lymphopenia was observed on admission but the lymphocyte count increased over the first seven days concomitant with the appearance of atypical lymphocytes. By day nine the lymphocyte count transiently fell again.

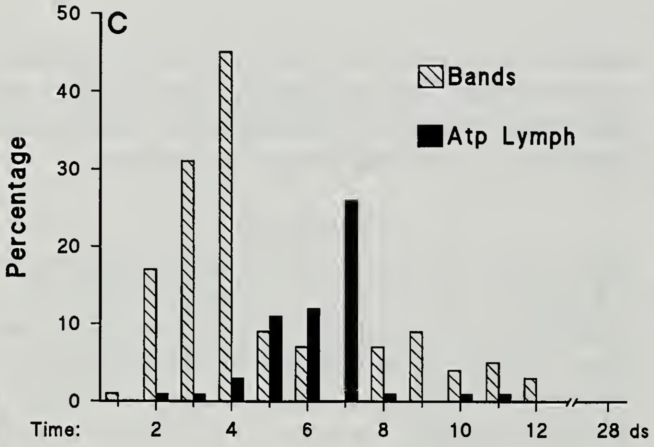

Figure 1C.—Percentage of band neutrophils and atypical lymphocytes. Band neutrophils were observed predominantly during the first week of admission and peaked on day four. At this point atypical lymphocytes began to increase and peaked on day seven.

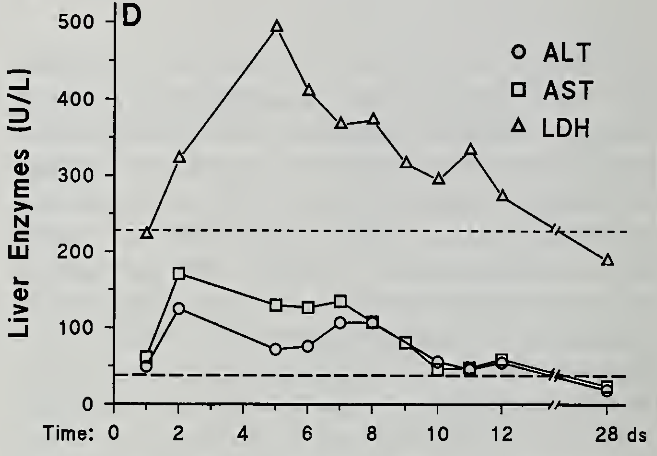

Figure 1D.—Levels of lactic dehydrogenase (LDH), alanine aminotransferase (ALT) and aspartate aminotransferase (AST) are shown. The dashed lines correspond to the upper normal limit for LDH (upper) and AST and ALT (lower).

ST depression in leads V4 to V6. The patient had no further chest pain until the night prior to admission. The pain was on the left side of the chest, constant, dull in nature, and without radiation. The patient also complained of fever (not documented), chills, and joint pains. He did not have a history of a preceding tick bite but had engaged in frequent outdoor activities. He had no recent travel outside of Westchester County. He denied cough, diaphoresis, nausea, vomiting, and diarrhea.

His past medical history was significant for hypothyroidism secondary to thyroidectomy (benign tumor) for which he was on thyroid hormone replacement therapy; prostatic carcinoma for which he received radiation therapy two years ago; and parvovirus B19 arthritis in 1990. He had no history of frequent infections.

On admission, the physical examination revealed a pulse rate of 100/min, a respiratory rate of 16/min, a blood pressure of 100/60 mm Hg, and an oral temperature of 39.7° C. An apical systolic murmur grade 1/6 was heard without radiation. A stool guaiac test was positive. The rest of the examination was within normal limits.

Laboratory parameters on admission and follow-up are shown in Fig. 1. Myocardial infarction was ruled out by serial measurement of creatine phosphokinase-MB isoenzymes. Cardiac catheterization showed normal coronary arteries and two dimensional echocardiogram showed

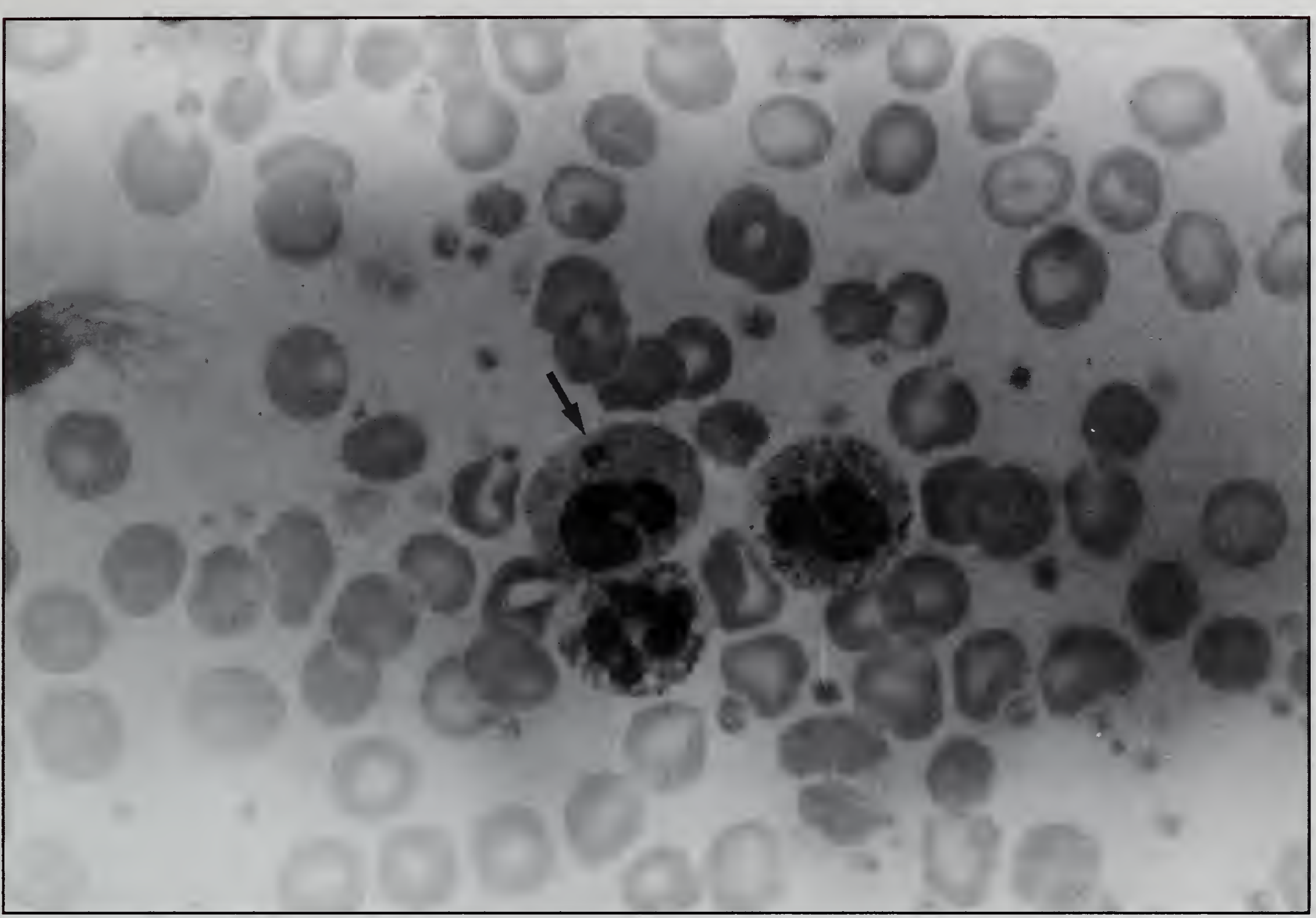

Figure 2.—Buffy coat smear showing characteristic intracytoplasmic inclusion (morulae) in a neutrophil (arrow).

mild aortic calcification and mild mitral regurgitation. Gastroduodenoscopy showed gastroesophageal reflux disease without bleeding. Colonoscopy and computed tomogram scan of the abdomen were normal.

The patient was treated empirically with cefazolin 1 g intravenously (iv) q 8h, changed to ceftazidime 1 g iv q 12 h after 48 hours but continued to have fever (38.9°C to 40.1°C). He developed diarrhea two days after admission. Vancomycin 125 mg orally q.i.d. for suspected *Clostridium difficile* diarrhea was initiated on the fourth hospital day. Metronidazole 500 mg intravenously every six hours was briefly given on the eighth hospital day. The patient received a total of two doses. Routine blood, urine, and sputum cultures were negative, as was stool for *C. difficile* toxin A immunoassay. An abdominal sonogram showed a hypoechoic liver consistent with hepatitis, but serological markers for hepatitis A, B, and C were negative.

On the eighth day of hospitalization, 6.2% of the peripheral blood neutrophils were found to have morulae suggestive of human granulocytic ehrlichiosis (Fig. 2). Morulae were also observed in peripheral blood eosinophils. Blood collected in ethylene-diamine tetra acetate (EDTA) was inoculated into the HL-60 human promyelocytic leukemia cell line for ehrlichiae culture[9] and also tested for specific nucleotide sequences of the HGE agent by polymerase chain reaction (PCR) using the ge9f/ge10r primer set.[10]

Doxycycline 100 mg iv every 12 hours was started on day eight of hospitalization. A few hours later the patient complained of shortness of breath, and a chest radiograph was consistent with adult respiratory distress syndrome. He was transferred to an intensive care unit for hemodynamic monitoring. Imipenem 500 mg intraveously every six hours was started on the ninth hospital day and continued for 24 hours. The patient became afebrile within 24 hours of starting doxycycline. Progressive normalization of liver enzymes followed over the next few days. PCR done on blood collected prior to doxycycline treatment detected HGE DNA, and characteristic intracytoplasmic morulae were visualized in HL-60 cells after five days of incubation (Fig. 3). The HGE agent did not grow from blood collected two and four days after doxycycline therapy had started, although morulae were observed in buffy coat smears for four days after starting doxycycline. The patient was discharged on day 14 of hospitalization with instructions to complete a 14-day course of doxycy-

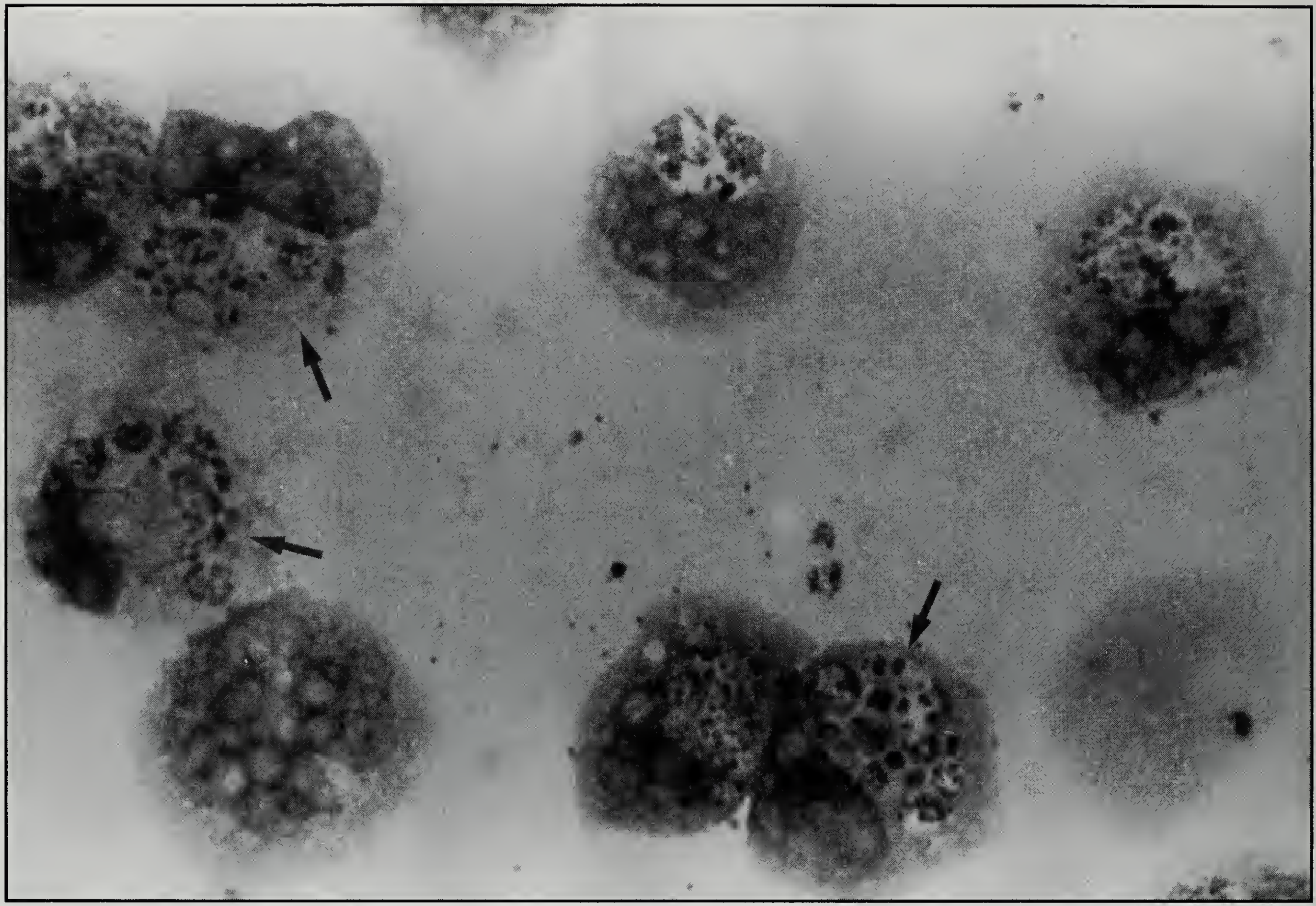

Figure 3.—Wright-stained smear of HL-60 promyelocytic cells with ehrlichial inclusions. Arrows indicate several infected cells.

cline. On follow up visit two weeks after discharge, the patient was asymptomatic with normal blood cell counts and liver enzymes. He remains well at the one-year follow up.

Blood collected eight days after admission tested positive by immunofluorescent antibody tests (IFA) to *E. equi, E. chaffeensis,* and human HGE isolate at titers of ≥ 2,560, 1,280, and 640, respectively. Four weeks into convalescence the titers to the human isolate rose to ≥ 2,560 and those to *E. equi* and *E. chaffeensis* remained unchanged. Six months later antibody titers to *E. equi* and *E. chaffeensis* were 1,280 and <80, respectively. At one year titer to *E. equi* and human isolate were 640 and ≥ 2,560 respectively. Tests to detect antibodies to *Borrelia burgdorferi* were negative in acute and convalescent phase sera.

Discussion

Limited knowledge is available on the natural history of HGE. Experimental infection of horses with the agent of HGE has shown that fever develops five days after challenge.[11] Gradual decline of leukocyte and platelet counts follows, with progressive recovery of these parameters 14 days postchallenge in the absence of antimicrobial treatment. Similar findings have been described in horses naturally infected with *E. equi.*[12]

In our patient, fever continued daily until doxycycline was started, despite the use of several beta-lactam antimicrobial agents. The patient had a positive stool guaiac test and mild diarrhea. Whether the gastrointestinal bleeding and diarrhea were related to HGE is unclear, but acute upper gastrointestinal bleeding has been described in one fatal case of HGE.[1] Although infrequent in *E. equi* infections of horses,[12] diarrhea has been present in other HGE cases diagnosed in our institution and in the midwest.[5,6]

The exact nature of the chest pain in our patient is not clear, but was unlikely to be of myocardial origin based on the electrocardiogram (EKG) findings and serial cardiac enzyme determinations. Furthermore, the coronary arteries were normal by cardiac catheterization and there were no findings of myocarditis, pericarditis, or endocarditis on 2-D echocardiography. Respiratory involvement has been previously reported in HGE. Twelve of 41 patients from the Midwest presented with cough and four had lung infiltrates.[6] Whether the chest pain in our patient was from lung origin is unclear. He later developed adult respiratory distress syndrome (ARDS), which has been reported in

HGE occasionally in more severe forms of the disease and in the elderly.[1] A possible explanation for chest pain in our patient is gastroduodenal reflux which was found on gastroduodenoscopy.

Leukopenia and thrombocytopenia in this case were transient and reversed before specific treatment with doxycycline was started. The neutrophil count was normal on admission and declined during the first few days of admission with appearance of younger forms (left shift). Lymphocytopenia was present during the first five days of admission, followed by lymphocytosis with almost 50% of lymphocytes identified as atypical lymphocytes (Fig. 1). Similar findings have been observed in other HGE cases seen at our center.[5] Lymphocytosis of γ/δ T cell type, morphologically mostly appearing as atypical lymphocytes has been described in many other human infections due to intracellular organisms including infections due to species of *Mycobacterium, Leishmania, Listeria, Trypanosoma*, and *E. chaffeensis* (the agent of human monocytic ehrlichiosis).[13] γ/δ T cell lymphocytes are usually low in percentage of peripheral blood cells (<15%) in other diseases. However, human monocytic ehrlichiosis (HME) has been associated with profound γ/δ T cell lymphocytosis with levels as high as 97% of peripheral blood leukocytes.[13] γ/δ T cell lymphocytosis has also been described in a case with HGE from northern California.[14] Lymphocyte phenotyping was not done in our patient. It is noteworthy that in our patient lymphocytopenia recurred transiently concomitant with the disappearance of the atypical lymphocytes. Further investigation is needed to explain these events.

Signs of hepatocellular injury are commonly observed in HGE.[1,3,5,6] In our case, aspartate aminotransferase (AST), alanine aminotransferase (ALT), and lactate dehydrogenase (LDH) levels remained elevated throughout the illness. Nevertheless, AST and ALT peaked on day two and LDH on day five and then started to decrease before doxycycline therapy was started. They became normal three weeks later. The pathology of hepatic injury in HGE is unknown, but focal hepatocyte necrosis with diffuse Küpffer cell hyperplasia and hemophagocytosis was documented at autopsy in a fatal case.[1]

Specific tests used to confirm the clinical suspicion of HGE include PCR and serology.[1,2] Edelman and Dumler have documented a sensitivity of 86% and a specificity of 100% for PCR using the ge9f/ge10r primer set for the diagnosis of acute cases of HGE.[9] By the eighth day of illness our patient had high titered antibodies against *Ehrlichia equi* and a human HGE isolate by IFA. Antibodies to *E. chaffeensis* were also detected, probably indicating a cross reaction between antigens of these organisms. Similar cross reactivity has been observed in other HGE cases, particularly in the Northeast United States.[4,5] Future use of assays that include purified antigens and perhaps specific recombinant antigens of the human agent, may improve serological methods.

Beta-lactam antimicrobials are ineffective in the treatment of HGE as evidenced by the presence of viable organisms despite seven days of treatment with this class of drugs. Doxycycline appears to be the treatment of choice. Results of *in vitro* susceptibility studies have confirmed the activity of doxycycline against HGE and also suggested that rifamycins and certain quinolones hold promise as alternative agents for treating this infection.[15] Further evidence of the *in vivo* activity of doxycycline against the agent of HGE was the inability to culture the organism from this patient after two days of treatment, despite the presence of morulae in blood smears.

Leukopenia and thrombocytopenia, so characteristic of HGE infection, may not always be present. These hematological parameters were normal in our case on presentation, but became abnormal several days later. Furthermore, they normalized prior to doxycycline treatment, indicating perhaps a self-limited phenomenon as has been observed in equine granulocytic ehrlichiosis due to *E. equi*.[12]

HGE should be considered in febrile patients living in geographic areas where *I. scapularis* are prevalent and who develop cytopenias with left shift during treatment with antimicrobials other than tetracyclines. Patients presenting with a febrile illness, atypical lymphocytosis, and abnormal liver enzymes may be suspected of having a viral infectious mononucleosis-like syndrome. HGE or HME should also be considered in these patients.

In conclusion, the diagnosis of HGE should initially rest on clinical suspicion, eventually supported by diagnostic tests: visualization of morulae, PCR, or paired serology. Definitive diagnosis relies on isolation of the organism, which currently has been achieved by only a few investigators. Overall, the clinical presentation and events that occurred in this patient represent the more severe form of HGE that is more commonly observed in the elderly.

Acknowledgments

The authors wish to thank Louis Rosenfeld for assistance in the preparation of graphs and Jennifer Walls and Kristin Asanovich for technical assistance. We also want to acknowledge the medical and nursing staff who cared for this patient.

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Community Acquired *Pseudomonas aeruginosa* Pneumonia

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AND PERUVAMBA R. VENKATESH, M.D.

ABSTRACT—*Pseudomonas aeruginosa* is an uncommon cause of community acquired pneumonia in immunocompetent hosts. We report two cases that did well once appropriate and prolonged antimicrobial therapy was initiated. They had no evidence of immune deficiency. The initial consideration was pulmonary tuberculosis in both cases given the subacute presentation, significant weight loss, and findings on chest roentgenogram.

Case Reports

Case one.—A 62-year- old white male presented with a month of cough, intermittent fevers, and 30-pound weight loss but denied night sweats, dyspnea, hemoptysis, or exposure to tuberculosis. Past history included colon cancer treated surgically in 1986. He smoked 1-1/2 packs of cigarettes per day. He lived at home and was caring for his bed-ridden wife who had a previous cerebrovascular accident and no history of pulmonary disease.

He was afebrile but looked chronically ill. His chest examination revealed tubular breath sounds at the right apex; he had a lower abdominal colostomy; and there was no clubbing. Lab data included a white cell count of 14.1x 10^9/L and hematocrit of 31. Chest roentgenographs showed a right upper lobe cavitary pneumonia with volume loss (Fig. 1).

The initial impression was pulmonary tuberculosis or an obstructive pneumonia. He was started on therapy for tuberculosis (Isoniazid, Rifampin, and Pyrazinamide) as an outpatient. Sputum samples were negative for acid fast bacillus and cytology. Purified protein derivative (PPD) skin test was negative. The sputum grew *Pseudomonas aeruginosa* (PsA) sensitive to ciprofloxacin. Antituberculous treatment was discontinued when the sputum culture returned negative for acid fast bacillus. Computed tomography of his chest revealed right upper lobe consolidation, some mediastinal adenopathy, but no parenchymal mass.

Bronchoscopy was normal but bronchial biopsies revealed chronic inflammation. The bronchial wash was negative for acid fast bacillus culture and grew normal oral flora.

The patient continued ciprofloxacin for three months. His chest roentgenograph and appetite improved. He gained weight and had developed no systemic illness two years postinfection.

Case two.—A 54-year-old white male presented with a two-week history of cough productive of green sputum, fever, dyspnea, and a 25-pound weight loss. He was on no medications, smoked l-1/2 packs of cigarettes a day, and drank six cans of beer a day. He was heterosexual, denied drug abuse or loss of conciousness. He worked in a laundry that served a local hospital.

Physical examination revealed normal blood pressure, tachycardia, respiratory rate of 24 per minute and temperature of 101° F. He was asthenic with poor dentition and was in respiratory distress. Chest examination revealed bronchial breath sounds in the right upper lobe. He had no clubbing.

Abbreviations Used in Text
PsA = *Pseudomonas aeruginosa*
PPD = purified protein derivative

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Blood work revealed a sodium of 125, blood urea nitrogen of 9, creatinine of 0.9, white cell count of 21x 10^9/L. Chest roentgenograph revealed right upper lobe consolidation with multiple cavitations without air fluid levels. (Fig. 2).

The patient was admitted and started on cefuroxime and clindamycin for possible aspiration pneumonia. Sputum samples were negative for acid fast bacillus but were positive for PsA.

Antibiotics were changed to intravenous cefipime and oral ciprofloxacin. A PPD skin test was negative and the patient was anergic. Temperature spikes continued and the antibiotics were changed to piperacillin and gentamicin.

A computed tomography of the chest showed a large right upper lobe and middle lobe cavitary pneumonia, bilateral lower lobe patchy opacities and no adenopathy. A bronchoscopy showed an inflamed bronchial tree with pus draining from the right upper lobe without obstruction. The bronchial lavage was negative for acid fast bacillus and cytology but grew PsA. HIV test was negative.

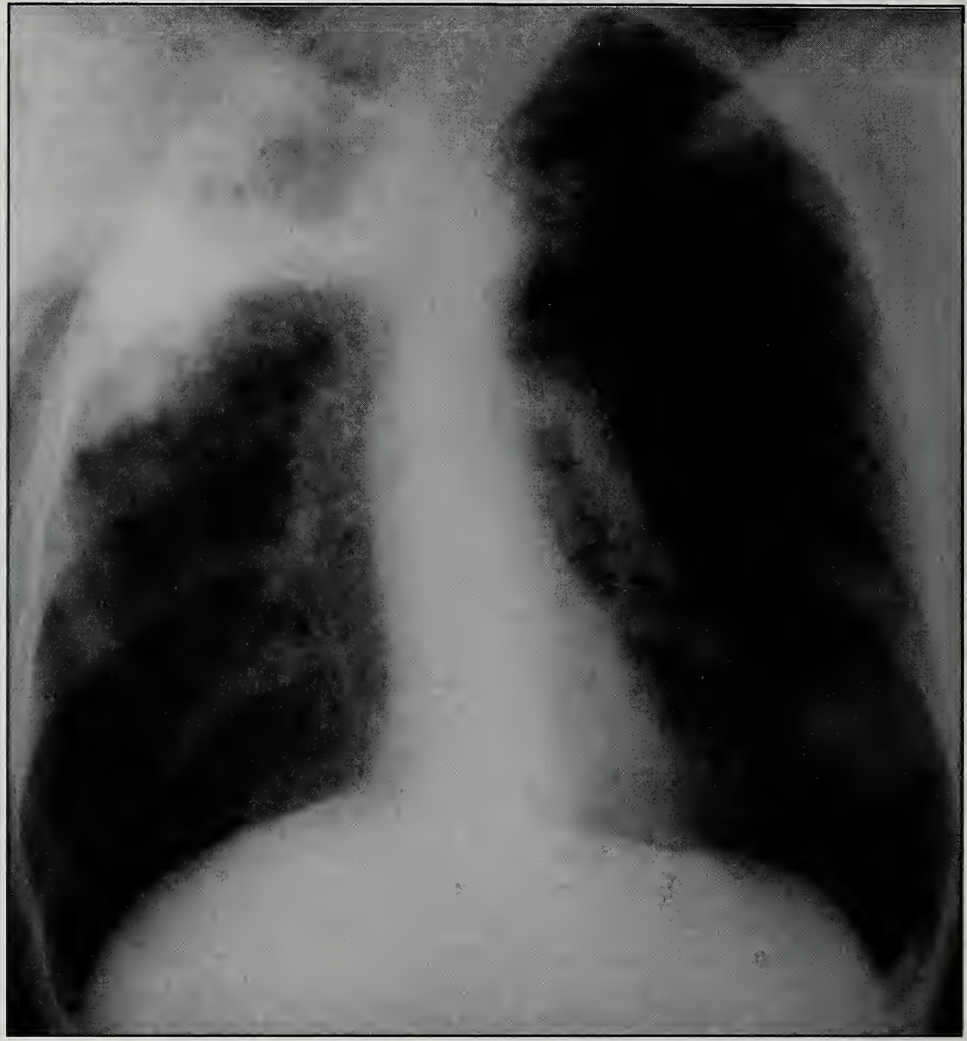

Figure 1.—Chest roentgenograph of case one showing a right upper lobe infiltrate with loss of lung volume.

The patient's condition initially deteriorated with worsening shortness of breath, increasing oxygen requirements and fever. Following bronchoscopy, steroids were added and his appetite improved with weight gain. Chest roentgenograph showed progression to involve both lungs followed by organization of the right upper lobe infiltrate into two large cavities. He received intravenous antibiotics for a total of thirty days and was discharged on ciprofloxacin and a tapering course of prednisone. He was afebrile off antibiotics three months following discharge.

Discussion

There have been few reports of primary PsA pneumonia in non-immunocompromised hosts. Most commonly PsA infections are hospital-acquired. Primary pneumonia with PsA has been linked to environmental risk factors such as whirlpool spas and home humidifiers.[4,5] Primary PsA pneumonia has presented most often as necrotizing pneumonia with lobar consolidation and sepsis.[1–3] Although colonization of gram negative organisms is a rarity in healthy hosts, it is interesting to speculate if PsA exposure occurred in patient one from his wife and patient two from his job.

Both the patients we have described presented with a sub-acute illness with weight loss and malaise in addition to respiratory symptoms rather than sepsis. Bacteremia could not be demonstrated in either case and both did well with prolonged antibiotic therapy. Their initial presentations favored tuberculosis or malignancy.

PsA should be considered as a causative organism of an acute or subacute presentation of cavitary pneumonia, particularly in previously healthy adults. The subacute presentation can be confused with tuberculosis. The presence of large numbers of gram negative rods on gram stain, pneumonia with overwhelming sepsis,

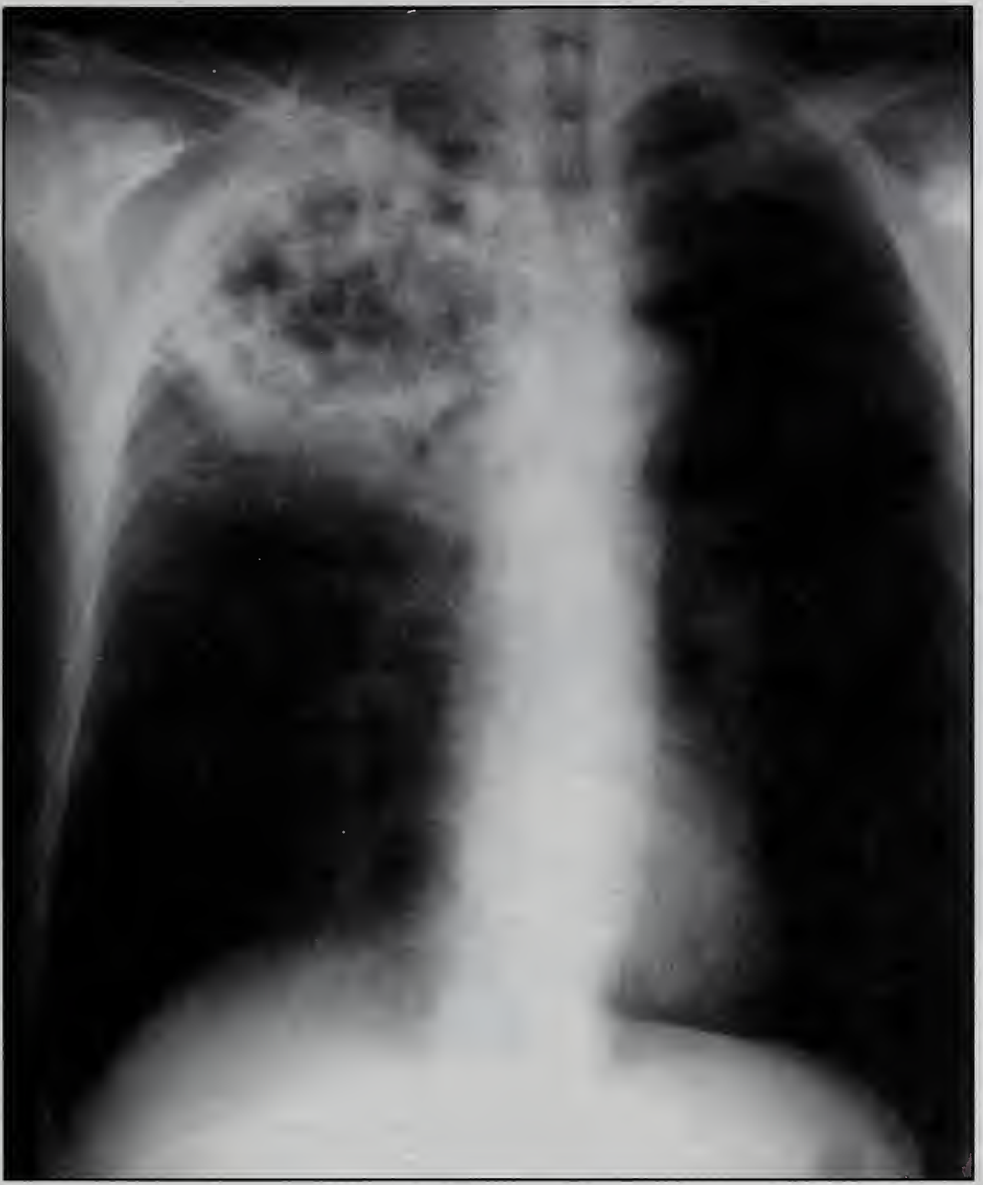

Figure 2.—Chest roentgenograph of case two showing a right upper lobe infiltrate with multiple cavitations.

or environmental risk factors known to be associated with PsA should lead to initiation of anti-PsA therapy.$^{2-6}$ PsA can be a cause of severe community acquired pneumonia without sepsis.

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DRUG INFORMATION UPDATE: HARTFORD HOSPITAL

Continuous Infusion of Beta-lactam Antibiotics

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Introduction

ALTHOUGH beta-lactam antibiotics have traditionally been given by intermittent infusion, administration by continuous infusion is gaining popularity, particularly for pharmacoeconomic reasons. By optimizing the pharmacodynamic profile of beta-lactams, continuous infusion attains better clinical outcomes, results in fewer side effects, and lowers labor and supply costs compared with intermittent infusion.

Pharmacodynamic Considerations

Ever since antibiotics became available, there has been considerable controversy regarding the most appropriate way to administer them to maximize bacterial killing and minimize toxicity. It has been only in the past several years that adequate scientific information has emerged from animal models of infection, in-vitro and in-vivo pharmacodynamic studies, and human clinical trials that now enable us to establish the best modes of administration to achieve these goals.

Aminoglycosides and fluoroquinolones eliminate bacteria most rapidly when their concentrations are appreciably above their minimal inhibitory concentrations (MICs) for organisms and, hence, their type of killing is referred to as concentration-dependent or dose-dependent killing.[1] On the other hand, beta-lactams exhibit little concentration-dependent bactericidal activity. Apparently once the concentration exceeds a critical value, which is felt to be about two to four times the MIC for an organism, killing proceeds at a zero order rate, and increasing antibiotic concentration does not change the microbial death rate. Thus, beta-lactam antibiotics exhibit time-dependent or concentration-independent killing.[2] Consequently, for beta-lactam antibiotics, like penicillins and cephalosporins, the best predictor of clinical outcome is the duration or time that concentrations remain above MICs during a dosing interval, and not the magnitude of these levels above the MIC.[3,4]

How long the concentration of a beta-lactam should remain above its MIC for suspected pathogens is somewhat controversial, but studies in neutropenic models of infection indicate the best response occurs when the time above the MIC is ≥ 50% of the dosing interval.[5–7]

Continuous Infusion

Maintaining antibiotic concentrations above the MIC for the entire dosing interval is best achieved by constant infusion. By this dosing method, one can maintain adequate levels above the MIC for the entire dosing interval employing the least amount of drug. Although intermittent dosing attains higher serum concentrations as compared with continuous infusions, these higher concentrations not only do not result in greater bacterial killing, but can be viewed as "wasting" antibiotics. Animal models have shown intermittent dosing obtains higher initial extravascular tissue penetration, but after equilibrium, constant infusion achieves up to 48% higher extravascular tissue concentrations compared to intermittent dosing.[8] In a meningitis animal model, a greater amount of penicillin reached the CSF when administered by continuous infusion compared with intermittent infusion.[9] By giving penicillins by constant infusion, the movement out from the CSF is partially blocked by interference with an active

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transfer of the penicillin via the choroid plexus. Giving a loading dose prior to starting the continuous infusion minimizes the lag time until the continuous infusion reaches steady state equilibrium.

Human Studies

Currently, there are few randomized studies comparing either the pharmacokinetics or clinical outcomes of continuous infusion *vs* intermittent dosing of beta-lactams in humans. At Hartford Hospital, several continuous infusion studies have been performed with beta-lactam antibiotics.

The first Hartford Hospital study compared cefuroxime given either as continuous infusion of 1500 mg or intermittently 750 mg every eight hours in the treatment of community-acquired pneumonia (CAP). The continuous infusion regimen was associated with a shorter length of treatment, decreased length of stay, lower total dose, and overall cost savings. The average amount of intravenous drug used decreased from 8±3g for intermittent dosing to 5±3g in continuous infusion cefuroxime. Duration of antibiotic therapy and hospital stay was shorter for continuous infusion 14.7 and 11.6 hours, respectively. The average combined daily cost of the antibiotics, labor and supplies were decreased, $63.64 ± $30.95 for the continuous infusion compared with $83.85 ± $34.82 for intermittent dosing.[10]

The second Hartford Hospital study involved a prospective, randomized trial comparing the efficacy of an aminoglycoside plus ceftazidime 3g given by continuous infusion with 2g every eight hours by intermittent injection in patients with nosocomial pneumonia. The continuous infusion regimen utilized half of the intermittent dose and maintained concentrations above the MIC for 100% of the dosing interval. The intermittent dosing regimen maintained concentrations above the MIC for 76% of the dosing interval.[11] Although the clinical and microbiologic outcomes were similar for the two regimens, the continuous infusion was less expensive.

In a final study performed at Hartford Hospital, healthy volunteers received 12g/1.5g piperacillin-tazobactam by continuous infusion with co-administration of 7mg/kg gentamicin through a Y-site adapter. Constant infusion maintained antibiotic concentrations above the MIC of susceptible organisms for 100% of the dosing interval without a reduction in either aminoglycoside or piperacillin serum concentrations.[12]

Because of this pharmacokinetic information in volunteers, Hartford Hospital decided to implement a third clinical study. In this project, piperacillin-tazobactam orders will be automatically converted to 8g/1g piperacillin-tazobactam continuous infusion with a loading dose of 2g/0.25g piperacillin-tazobactam for the following FDA approved indications: intra-abdominal infections (community and hospital acquired), and skin/soft tissue/bone infections. For hospital acquired lung infections, patients will be converted to a dose of 12g/1.5g piperacillin-tazobactam continuous infusion with a loading dose of 2g/0.25g piperacillin-tazobactam. Only dialysis patients will be excluded from the study.

This regimen is designed to rapidly achieve steady state concentrations by administering a 2g/0.25g piperacillin-tazobactam loading dose. The loading dose will achieve a peak serum concentration of 130-mcg/mL piperacillin and limit any initial difference between continuous and intermittent infusion regimens. The continuous infusion regimen was selected, in part, due to a healthy volunteer study where continuous infusion of 8g/1g piperacillin-tazobactam demonstrated steady state concentrations at or above the MICs of susceptible bacteria *Enterobacteriaceae, Bacteroides, Haemophilus*, and *Staphylococcus*.[13–15] For patients with nosocomial pneumonia where *Pseudomonas aeruginosa* is the likely pathogen, a 12g/1.5g piperacillin-tazobactam continuous infusion regimen will be administered. In a healthy volunteer study, this regimen maintained steady state concentrations of 28±6.9mcg/mL.[12] Although, steady state piperacillin-tazobactam concentrations were below the MIC90 for *Pseudomonas aeruginosa*, the MIC is effectively lowered by adding an aminoglycoside for synergy.

Pharmacoeconomics

Previous studies have demonstrated the cost savings associated with continuous infusion. A time-motion study conducted at Hartford Hospital found that after the second day of therapy, ceftriaxone 1g/day by single daily Add-vantage infusion to cost $7.91/day more than cefotaxime 2g/day Add-vantage by continuous infusion.[16] The study included antibiotic acquisition costs, supply costs and labor costs of the pharmacist, technician, and nursing personnel for preparation, delivery and administration of the antibiotic.

The total savings for conversion from intermittent infusion to continuous infusion is dependent on the intermittent infusion dosing schedule and antibiotic cost. For example, during the fiscal year 1997–1998, at Hartford Hospital 310 patients received 4,459 doses of piperacillin/tazobactam dosed 4.5g every eight hours. Based on a previous time-motion study, conversion from intermittent dosing to continuous infusion would have a projected cost savings of $31,000.[12,16] Additionally, if Hartford Hospital utilized 3g/0.375g piperacillin-tazobactam dosed every six hours or every four hours, the projected savings for conversion to continuous infusion would increase to $37,000 and $82,000, respectively.

Although cost savings directly attributed to time, labor, supplies and drug acquisition are part of a pharmacoeconomic analysis, even greater cost savings may be achieved by decreasing the patient's length of stay and avoiding adverse events (ie, phlebitis, diarrhea). Currently, there are few such studies. Phlebitis secondary to antibiotic administration is a common adverse event. Removal of the cannula, increased pain for the patient, and increased staff workload usually follow phlebitis. Invariably, a peripherally inserted central catheter (PICC line) will be placed if the patient develops phlebitis. At Hartford Hospital the insertion of a PICC line was found to cost $210 for the kit, nursing labor, and x-ray for confirmation.

In a study comparing cefuroxime by continuous infusion with intermittent infusion, the overall incidence of phlebitis was 11% and 19%, respectively.[17] The length of time before developing phlebitis increased in patients receiving continuous infusion compared with intermittent infusion, 48 hours *vs* 37 hours, respectively.

Disadvantages

Disadvantages to continuous infusion technique include problems associated with limited intravenous access, compatibility issues, patient mobility and infusion pump cost. At times, hospitalized patients have more than one IV. Intravenous access is often limited and continuous infusion ties up one administration site. To simultaneously infuse other medications, compatibility issues must be addressed. Also, manipulating the infusion pump often makes ambulating difficult for the hospitalized patient. However, for ambulatory patients in the outpatient setting, a variety of small, portable infusion pumps are available. The cost of infusion pumps can be an issue for some hospitals. Fortunately, with an agreement to purchase administration sets from pump manufacturers, use of the infusion pump is often free to the hospital.

Conclusion

Studies have shown that optimizing pharmacodynamics improves patient outcomes and can lead to improved pharmacoeconomics. Although large, randomized studies have not been performed, evidence is accumulating that suggests continuous infusion of antibiotics with concentration-independent killing is a more cost-effective mode of administration as compared with intermittent dosing.

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Update: Influenza Activity—United States, 1998–1999 Season

THIS report summarizes influenza activity in the United States from 4 October 1998, through 27 February 1999. It also presents results of an investigation of an influenza outbreak among staff and residents at one long-term-care facility (LTCF), and estimates the 1998–99 influenza vaccine effectiveness against the circulating influenza A(H3N2) viruses at that facility. Based on influenza surveillance data, influenza activity in the United States began to increase in mid-January 1999 and remained elevated in most regions of the country through the week ending 27 February.

The percentage of patient visits to approximately 350 sentinel physicians for influenza-like illness (ILI) increased from baseline levels of 0%–3% during the week ending 23 January and has remained elevated for six consecutive weeks. For the week ending 27 February, 4% of patient visits were for ILI. Visits for ILI were above baseline levels in all influenza surveillance regions for the week ending 27 February except the mid-Atlantic and east south central regions, which had levels of 1% and 3%, respectively.

Since the week ending 23 January, at least 25 states have reported either widespread or regional activity each week (Fig. 1). The highest number of states reporting either widespread or regional activity during any one week was 43 during the week ending 13 February. State and territorial epidemiologists in 41 states and the District of Columbia reported either widespread or regional influenza activity* for the week ending 27 February.

The percentage of deaths attributed to pneumonia and influenza (P&I) among 122 U.S. cities was 8.1% for the week ending 27 February, which is above the epidemic threshold[†] of 7.5%. Mortality from P&I exceeded the epidemic threshold for three consecutive weeks beginning the week ending 13 February.

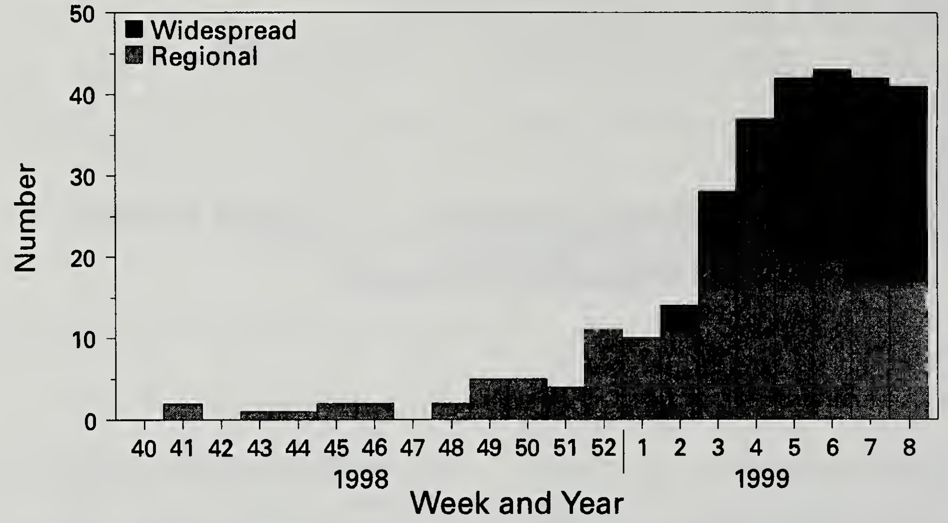
From October 4, 1998 through February 27, 1999, the World Health Organization and the National Respiratory Enteric Virus Surveillance System collaborating laboratories in the United States reported detection of influenza in 6,529 (12%) of 52,355 clinical specimens submitted for respiratory virus testing. Of the influenza-positive specimens, 5,170 (79%) were type A and 1,359 (21%) were type B. Of the 5,170 influenza A isolates, 1,275 (25%) were H3N2 viruses, 12 (0.2%) were H1N1 viruses, and 3,883 (75%) were not subtyped. In the west north central, east north central, and east south central regions, 35%–46% of the influenza isolates were type B.

Of 169 influenza A(H3N2) isolates collected during 4 October 1998 to 27 February 1999, that were antigenically characterized at CDC, all were characterized as A/Sydney/5/97-like viruses, the H3N2 virus strain contained in the 1998–99 influenza vaccine. Two influenza A(H1N1) isolates were characterized as A/Bayarn/7/95-like viruses, antigenically distinct from A/Beijing/262/95, the 1998–99 H1N1 vaccine strain; however, A/Beijing/262/95 produced high titers of antibodies that cross-react with A/Bayern/7/95. All 51 influenza type B isolates were antigenically similar to B/Beijing/184/93, the recommended type B vaccine strain.

Reprinted from the *Morbidity and Mortality Weekly Report*, 12 March 1999; vol. 48, no. 9, Centers for Disease Control (CDC), National Institute for Health (NIH).

*Levels of activity are 1) *no activity*; 2) *sporadic*—sporadically occurring ILI or culture-confirmed influenza with no outbreaks detected; 3) *regional*—outbreaks of ILI or culture-confirmed influenza in counties with a combined population of <50% of the state's total population, and 4) *widespread*—outbreaks of ILI or culture-confirmed influenza in counties with a combined population of ≥50% of the state's total population.

†The epidemic threshold is 1.645 standard deviations above the seasonal baseline. The expected seasonal baseline is projected using a robust regression procedure in which a periodic regression model is applied to observed percentages of deaths from P&I since 1983.



*Levels of activity are 1) *no activity;* 2) *sporadic*—sporadically occurring influenza-like illness (ILI) or culture-confirmed influenza with no outbreaks detected; 3) *regional*—outbreaks of ILI or culture-confirmed influenza in counties with a combined population of <50% of the state's total population; and 4) *widespread*—outbreaks of ILI or culture-confirmed influenza in counties with a combined population of ≥50% of the state's total population.

Figure 1.—Number of state and territorial epidemiologists reporting widespread or regional influenza activity,* by week and year—United States, 4 October 1998 to 27 February 1999

Long-Term-care Facility Outbreak

The California Department of Health Services (CDHS) requires that all LTCFs report respiratory illness outbreaks to the state or local health department. As of 27 February, CDHS had received five reports of culture-confirmed influenza outbreaks among the approximately 1,200 LTCFs in the state. Following is a result of an investigation of one of these outbreaks.

On 31 December 1998, a LTCF notified the Santa Clara County Public Health Department of an ILI outbreak among residents of two units in one of the facility's four buildings. Nasopharyngeal swab specimens from eight of 10 ill residents were positive for influenza A by direct fluorescent antibody testing. The outbreak investigation included active surveillance for ILI (temperature ≥100 F [≥38 C] and cough or sore throat or rhinitis), viral culture of nasopharyngeal swab samples collected from selected ill residents and staff, and collection of vaccination and illness histories from residents and staff in the two affected units. Vaccine effectiveness against ILI was calculated as one minus relative risk.

Residents in this facility are assigned to different buildings according to the level of care required. The most debilitated residents, most of whom are bedridden and require complete care, reside in Building 1. During the fall, residents in all four buildings (n=524) received influenza vaccination, except residents with medical contraindications. Of the 1,200 staff members offered vaccine, approximately 200 (17%) were vaccinated at the facility, and some may have been vaccinated by outside providers.

The first cases of ILI occurred during 21 December to 28 December 1998, among five unvaccinated nurses who worked in two adjacent units in Building 1. From 29 December 1998, through 17 January 1999, additional ILI cases developed among residents and staff from those two units and others in Building 1 (Fig. 2). Thirty-four (11%) of 309 staff members and 25 (13%) of 192 residents of Building 1 developed ILI. Three residents were hospitalized, and two died, including one who was not vaccinated because of a history of egg allergy. Forty-nine of the 50 residents (median age: 30 years [range: 13–87 years]) residing in the two initially affected units had been vaccinated before the outbreak compared with 12 (26%) of the 47 staff members (median age: 44 years [range: 20–68 years]).

Vaccine effectiveness against ILI was 72% (95% CI: -1.3–92.4) among the 47 staff members. Vaccine effectiveness was not estimated for residents because of the small number of unvaccinated persons. Four influenza A(H3N2) isolates obtained from ill residents were antigenically characterized as A/Sydney/5/97-like viruses.

Outbreak-control measures included cohorting ill residents and initiating droplet precautions[1] and administering amantadine for prophylaxis of nonill residents and treatment of ill residents. Unvaccinated staff were offered amantadine prophylaxis and influenza vaccine. Ill staff were discouraged from coming to work, and ill visitors were asked to postpone their visits.

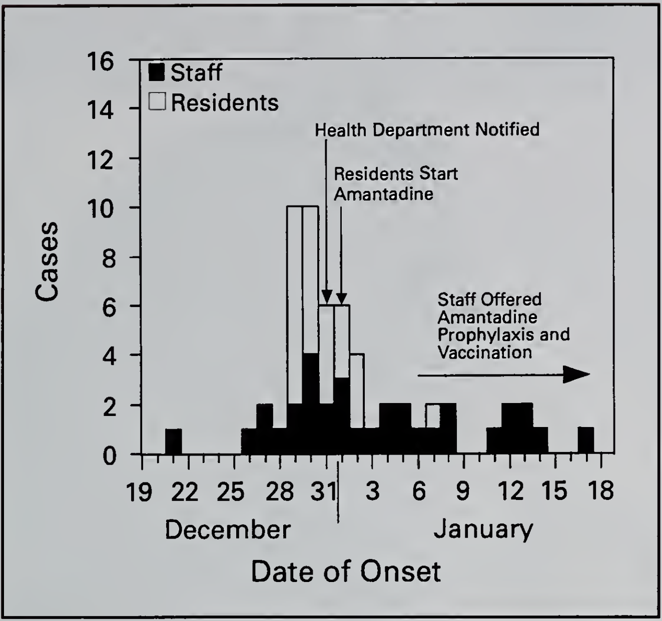


Figure 2.—Influenza-like illness among residents and staff of a long-term-care facility—Santa Clara County, California, 19 December 1998 to 18 January 1999

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Editorial Note: Almost all states have reported either regional or widespread influenza activity this influenza season. Although only 21% of influenza isolates have been type B, influenza B viruses have been detected in all influenza surveillance regions. Influenza A/Sydney/5/97 (H3N2)-like virus appears to be the predominant strain so far this influenza season.

The influenza A outbreak described in this report illustrates several points. First, influenza outbreaks can occur among highly vaccinated LTCF populations even in years when the vaccine is well matched to circulating virus strains;[2,3] LTCFs should conduct surveillance to identify clusters of respiratory illness and should alert state or local health departments when clusters are identified. Second, early detection of influenza outbreaks and timely initiation of control measures, such as cohorting of ill residents, use of droplet precautions, and use of antiviral medications (amantadine or rimantadine) for prophylaxis or treatment of persons at high risk for influenza A-related complications, can limit the spread of disease.[1,4] Amantadine and rimantadine are 70%–90% effective in preventing influenza A infections and can reduce severity and duration of symptoms from influenza A when administered within 48 hours of onset; however, these medications are not effective against influenza type B viruses.[5] Chronic-care facilities should know which laboratories in their area perform rapid influenza A testing and should develop a plan to rapidly detect influenza A outbreaks and to administer antiviral medications if influenza is detected.[4–7] Third, health-care workers can act as a vehicle for introducing influenza illness into LTCFs.[3,7]

Because influenza infections can be severe in debilitated populations and because vaccine effectiveness is lower among LTCF residents (30%–40%) than in healthy adults (70%–90%), the Advisory Committee on Immunization Practices recommends that health-care workers and others caring for high-risk persons receive influenza vaccine annually.[2,3,5,7] Health-care workers and family members should be educated about the potentially serious consequences of influenza illness for high-risk persons and the need to limit contact with these persons. When health-care workers and family members are ill, they should avoid contact with high-risk persons.

Influenza surveillance data collected by CDC are updated weekly throughout the influenza season. Summaries are available through CDC; telephone (888) 232-3228, or fax (888) 232-3299 (request document number 361100). Surveillance information also is available on the World-Wide Web at <http://www.cdc.gov/ncidod/diseases/flu/weekly.htm>.

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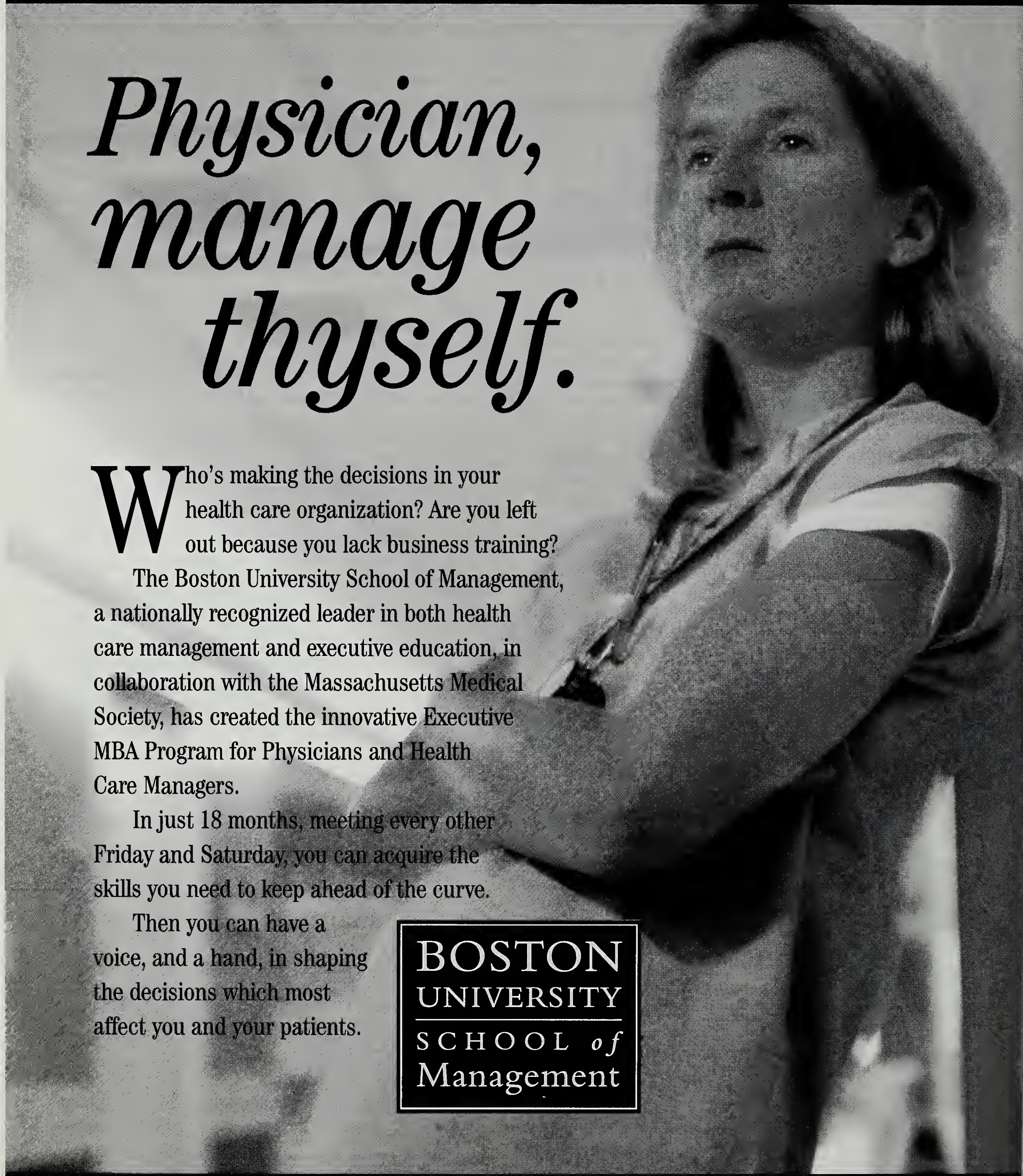

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MORBIDITY AND MORTALITY WEEKLY REPORT

Adoption of Hospital Policies for Prevention of Perinatal Group B Streptococcal Disease—United States, 1997

GROUP B streptococcal (GBS) infections are the leading bacterial cause of disease and deaths among newborns in the United States. In 1993, the annual cost of caring for newborns with sepsis caused by group B Streptococcus was an estimated $294 million.[1] A survey of hospital GBS disease prevention practices in 1994 indicated that those hospitals with a prenatal screening policy had fewer neonatal GBS disease cases.[2] In 1996, to promote a coordinated approach to prevention, CDC issued consensus guidelines about GBS disease prevention that were endorsed by the American College of Obstetricians and Gynecologists and the American Academy of Pediatrics.[3–5] These consensus guidelines recommend using either a screening-based strategy or a risk-based strategy for identifying women who should receive intrapartum antimicrobial prophylaxis. To evaluate adoption of the consensus guidelines, in 1997, hospitals in eight surveillance areas were surveyed, and the results were compared with findings of a similar survey conducted in 1994. The proportion of hospitals with prevention policies in each site was compared with the site's rate of early-onset disease to assess the impact of the prevention policies. This report presents the survey findings, which indicate that more hospitals have adopted GBS disease prevention policies since issuance of the consensus guidelines.

In 1997, a comprehensive survey was mailed to all 189 hospitals providing obstetric services in the following surveillance areas: the 20-county metropolitan statistical area of Atlanta, Georgia (n=31 hospitals); the three-county San Francisco Bay area of California (n=24); the seven-county Rochester area of New York (n=12); the seven-county Twin Cities area of Minnesota (n=20); the three-county Portland area of Oregon (n=13); five urban counties in Tennessee (n=24); and the entire states of Connecticut (n=30) and Maryland (n=35). The survey assessed laboratory methods used to identify group B streptococci, several patient demographic characteristics, and obstetric policies. In 1994, three separate surveys evaluating the same topics were sent to all 295 hospitals providing obstetric services in an eight-county Atlanta area of Georgia (n=20); the three-county San Francisco Bay area of California (n=29); and the entire states of Maryland (n=36), Missouri (n=123), and Oklahoma (n=87).[2] Survey responses to the 1997 study were compared with those to the 1994 study using the χ_2 test. For the hospitals that responded to the survey in both years, survey responses were compared using McNemar's test.

To identify GBS disease cases, surveillance personnel regularly requested standardized reports of cases of invasive GBS disease from each laboratory that served acute-care hospitals within the specified surveillance areas. Periodic audits of laboratory records were conducted to validate completeness of reporting. A case of early onset neonatal GBS disease was defined as isolation of group B streptococci from a normally sterile site (eg, blood or cerebrospinal fluid) from a resident of an area under surveillance with illness onset before seven days of age. To calculate the incidence of early-onset GBS disease for the surveillance areas, the number of live-born infants for 1996 was obtained from the respective state health departments or from CDC's National Center for Health Statistics. The incidence of GBS disease in 1996 was not available for the seven counties in New York.

Of the 189 hospitals surveyed in 1997, a total of 177 (94%) completed the survey. Of those that responded, 103 (58%) had a general GBS disease prevention policy, and 82 (46%) had a written policy. To determine who should receive intrapartum antibiotics, 50 (28%) followed the screening-based strategy in the consensus guidelines, 36 (20%) followed the risk-based strategy in the consensus guidelines, and seven (4%) followed both strategies. Most of these policies were established in 1996 and 1997 (Fig. 1). Hospitals with a neonatal intensive-care unit (NICU) were equally likely as those without an NICU to have a

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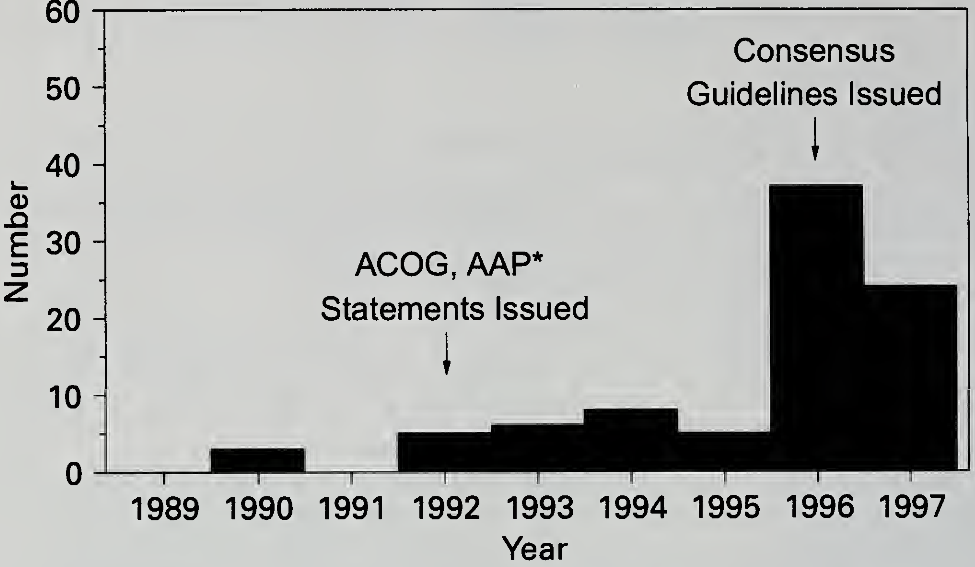

*In 1992, the American College of Obstetricians and Gynecologists (ACOG) and the American Academy of Pediatrics (AAP) issued initial statements on GBS prevention.

Figure 1.—Number of hospitals with group B streptococcal (GBS) disease prevention policies, by year of policy establishment—United States, 1989–1997.

GBS disease prevention policy (54 [59%] of 91 *vs* 49 [57%] of 86). Although more hospitals with academic affiliations had GBS disease prevention policies than hospitals without those affiliations (38 [67%] of 57 *vs* 64 [54%] of 118), the difference was not statistically significant.

Of the 295 hospitals surveyed in 1994, a total of 154 (52%) completed the obstetric policy section, 234 (79%) completed the hospital patient demographics section, and 247 (84%) completed the laboratory section.[2] Compared with 1994, a higher proportion of hospitals in 1997 had obstetric policies for preventing neonatal GBS disease and recommended appropriate laboratory methods (including the use of selective broth media) for isolation of group B streptococci (Table 1). In 1997, 80% of GBS disease prevention policies were written policies, compared with 34% in 1994. Of those hospitals with prenatal screening policies, the proportion with policies consistent with the 1996 recommendation to screen all women and to culture specimens from both the vagina and rectum increased from 1994 to 1997. Among the hospitals for which a response was available for both 1994 and 1997, the proportion of hospitals with written policies and recommendations for using appropriate selective broth culture media increased from 1994 to 1997 (Table 1).

According to 1996 surveillance data from seven areas, the incidence of early-onset GBS disease ranged from 0.6 cases per 1,000 live births to 1.8 cases per 1,000 live births. Geographic areas in which a higher proportion of hospitals had GBS disease prevention policies had lower incidences of early-onset GBS disease (R2=0.62; p-0.03) (Fig. 2).

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Editorial Note: Early-onset GBS disease can be prevented by targeted use of antimicrobial prophylaxis after onset of labor or rupture of membranes.[3] The preventable portion of early-onset GBS disease has been estimated as 78% for the screening-based approach and as 41% for the risk-based approach.[6] Surveillance data for 1993–1995,

Table 1.—Total respondents and number and percentage of hospitals with group B streptococcal (GBS) disease prevention policies, by policies and policy components— United States, 1994 and 1997

	1994			1997			
Policies and policy contents	**Total respondents**	**No. with policy**	**(%)**	**Total respondents**	**No. with policy**	**(%)**	***P* value**
Respondents to obstetric policy component of survey							
Any GBS disease prevention policy	147	58	(39%)	177	103	(58%)	<0.01
Written policy	147	20	(14%)	177	82	(46%)	<0.01
Intrapartum antibiotic prophylaxis policy	147	50	(35%)	177	95	(54%)	<0.01
Indication for treatment							
Positive for group B *Streptococcus*	45*	16	(36%)	95	50	(53%)	0.09
Risk factors identified by guidelines†	45	8	(18%)	95	36	(38%)	0.03
Both of the above	45	13	(29%)	95	7	(7%)	<0.01
Prenatal screening policy	145	36	(25%)	177	66	(37%)	0.02
Indication for screening							
Screen all women§	32*	9	(26%)	66	34	(52%)	0.05
On request	32	6	(19%)	66	3	(5%)	0.05
Per physician discretion	32	16	(50%)	66	25	(38%)	0.36
No one screened	32	2	(6%)	66	1	(2%)	0.25
Screening culture sites							
Vagina and rectum)	32	10	(31%)	64*	48	(75%)	<0.01
Vagina and cervix	32	8	(25%)	64	2	(3%)	<0.01
Vagina only	32	9	(28%)	64	5	(8%)	0.01
Cervix only	32	3	(6%)	64	2	(3%)	0.33
Timing of culture Recommended time¶	32	7	(22%)	65*	46	(65%)	<0.01
Laboratory isolation methods for prenatal screening							
Selective broth media§	24	14	(6%)	161	76	(47%)	<0.01
Respondents to both 1994 and 1997 surveys							
Any GBS disease prevention policy	51	18	(35%)	51	29	(57%)	0.21
Written policy	51	8	(16%)	51	21	(41%)	<0.01
Recommend selective broth media	60	3	(5%)	60	32	(53%)	<0.01

*Totals differ from number with intrapartum antibiotic policy or number with screening policy because of missing data.

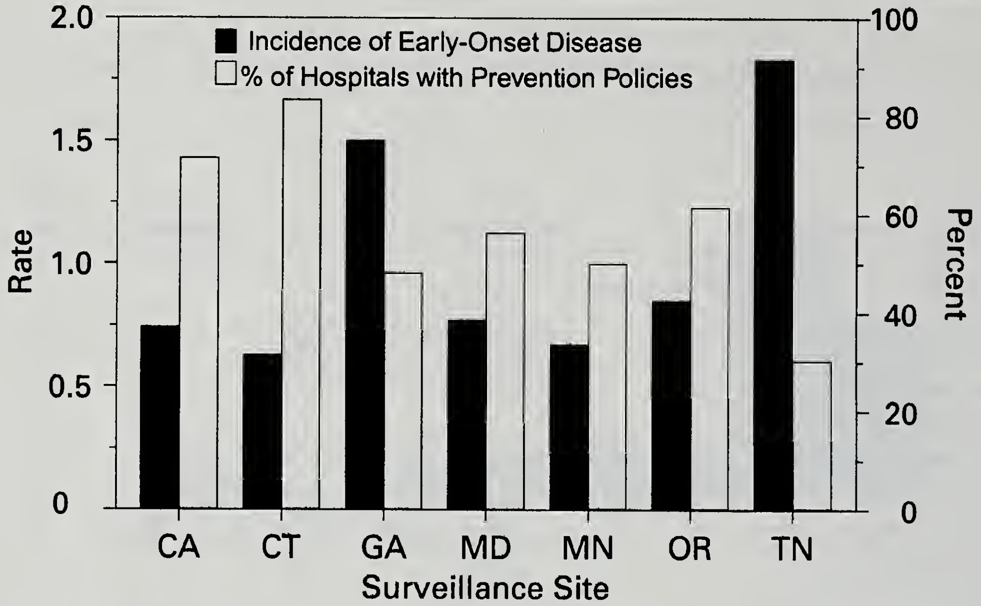
†Risk factors in the 1992 American College of Obstetricians and Gynecologists guidelines (intrapartum fever, preterm labor, prolonged duration of membrane rupture, or previous infant with GBS disease) for 1994 survey; risk factors in the 1996 consensus guidelines (1992 risk factors and GBS bacteriuria during current pregnancy) for 1997 survey.

§Recommended by the 1996 consensus guidelines.

¶For 1994 survey, 26-28 weeks' gestation; for 1997 survey, 35–37 weeks' gestation.

which included four of the eight sites surveyed in 1997, revealed a significant decrease in the incidence of early-onset GBS disease.[7] Since the consensus guidelines were issued in 1996, substantially more hospitals have adopted GBS disease prevention policies and laboratory methods for isolating group B *Streptococcus* that may be effective against early-onset GBS disease. This increase in adoption of GBS disease prevention policies and appropriate laboratory methods should result in a continued decrease in the incidence of early-onset GBS disease.

The findings of the analysis that combined 1996 GBS surveillance data with hospital survey results indicate that geographic areas in which more hospitals have GBS disease prevention policies have less early-onset GBS disease. Although the survey measured policies and not actual practices, this finding suggests that prevention policies are being followed. Ongoing studies in the surveillance areas will assess how strongly GBS disease prevention policies affect hospital-specific rates of early-onset disease.



***Per 1,000 live-born infants.**

†Defined as isolation of group B streptococci from a normally sterile site (eg, blood or cerebrospinal fluid) from a resident of an area under surveillance with illness onset before seven days of age.

§Surveillance sites included the following areas: the 20-county metropolitan statistical area of Atlanta, Georgia (n=31 hospitals); the three-county San Francisco Bay area of California (n=24) the seven-county Twin Cities area of Minnesota (n=20); the three-county Portland area of Oregon (n=13); five urban counties in Tennessee (n=24); and the entire states of Connecticut (n=30) and Maryland (n=35).

Figure 2.—Incidence rate of early-onset group B stroptococcal (GBS) disease,† 1996 and percentage of hospitals with GBS disease prevention policies, 1997, by surveillance site§—United States .

In 1994, hospitals with academic affiliations were more likely to have prevention policies than those without academic affiliations (36% *vs* 18%; P=0.03), and hospitals with a NICU also were more likely than those without a NICU to have prevention policies (53% *vs* 31%; P=0.02).[2] However, by 1997, differences between these specialized hospitals and others were no longer statistically significant. These data suggest that issuance of the consensus guidelines has resulted in increased use of GBS disease prevention strategies by providers in community hospitals.

The findings in this report of an increase in the number of hospitals with GBS disease prevention policies suggest that issuance of consensus guidelines may have played a role in adoption of such policies. However, nearly half of the hospitals surveyed are not using either of the two strategies recommended in the consensus guidelines. In addition, approximately half of the hospitals are not using appropriate selective broth culture media. The use of selective broth media is key to an effective prenatal screening program, improving the yield of prenatal screening cultures by up to 50%.[8]

Strategies to prevent neonatal GBS disease should include efforts directed toward health-care providers in both community and academic institutions. These efforts should focus on increasing awareness of GBS disease as a preventable disease, increasing use of the screening-based strategy or the risk-based strategy, and increasing use of selective broth media. Integration of GBS disease prevention efforts with programs for prevention of other perinatal diseases (eg, maternal use of folic acid to prevent neural tube defects[9] and screening and vaccination to prevent perinatal hepatitis B infections[10] may increase awareness and acceptance of these perinatal disease prevention strategies. Tracking the progress of strategies for preventing these diseases should continue to be an important national health objective.

Copies of the GBS disease prevention guidelines, clinical posters, technical slide sets for health professionals, and both printed and video material for prenatal patients are available from CDC's Division of Bacterial and Mycotic Diseases, National Center for Infectious Diseases, Mailstop C-23, 1600 Clifton Road, N.E., Atlanta, GA 30333, or from the World-Wide Web at <http://www.cdc.gov/ncidod/dbmd/gbs/>.

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Tamoxifen for Prevention of Breast Cancer

TAMOXIFEN *(Nolvadex*- Zeneca), an anti-estrogen used for many years in the treatment of breast cancer, has now been approved by the FDA for reducing the incidence of breast cancer in women at increased risk of developing the disease. The approval was based on the results of a single multicenter trial, which was stopped early because of favorable results.

MECHANISM OF ACTION—Tamoxifen competes with estrogen for binding to estrogen receptors in the cell nucleus, altering gene transcription and protein synthesis and inhibiting growth of estrogen-dependent tumor cells. In some tissues, tamoxifen acts as an estrogen agonist, with a favorable effect on plasma lipid levels and bone mineral density, but an unfavorable one on endometrial malignancy and thromboembolism.

TREATMENT OF CANCER—Used as an adjuvant in patients with primary estrogen receptor-positive breast cancer, tamoxifen decreases the incidence of recurrence or metastasis and prolongs survival. In patients with advanced disease, tamoxifen causes temporary regression of the tumor in some patients (Osborne CK: *N Engl J Med* 1998; 339:1609).

EFFECTIVENESS IN PREVENTING CANCER— A double-blind randomized trial enrolled women more than 35 years old considered to be at increased risk of developing breast cancer because they were at least 60 years old, had a history of lobular breast cancer *in situ,* or were estimated by an algorithm to have a risk higher than 1.66% of developing the disease within five years. The algorithm was based on age, history of breast biopsies, family history of breast cancer, age at menarche (younger age increases risk), and age at first live birth (older age increases risk). Among 13,175 predominantly white women followed for a mean of 48 months, breast cancer developed in 244 taking placebo and 124 taking tamoxifen 20 mg/day (Fisher B, et al: *J Natl Cancer Inst* 1998; 90:1371). Among women more than 60 years old but otherwise at low risk, one of 297 taking placebo and three of 284 taking tamoxifen developed breast cancer (<www.fda.gov/cder/drug.htm>, Tamoxifen Approval, Medical Review). Two smaller European studies with different enrollment criteria had failed to show any effect of tamoxifen on breast cancer incidence (Powles T, et al: *Lancet* 1998; 352:98; Veronesi U, et al: *Lancet* 1998; 353:93).

OTHER EFFECTS—Endometrial cancer developed in 18 women on placebo and 37 taking tamoxifen; all of the cancers in women taking tamoxifen were low-grade and early-stage. Myocardial infarction occurred in 28 women taking placebo and 31 on tamoxifen. Fractures of the hip, spine, or radius occurred in 137 women on placebo and 111 taking tamoxifen. Deep vein thrombosis (22 *vs* 35), pulmonary embolism (six *vs* 18), and stroke (24 *vs* 38) were more common with tamoxifen, and occurred more frequently in women more than 50 years old. Cataracts also developed more frequently with tamoxifen (507 *vs* 574). Tamoxifen was associated with hot flashes and other symptoms of estrogen withdrawal.

COST—The cost of 20 mg/day of *Nolvadex* or generic tamoxifen (Barr Laboratories) for five years would be about $6,000.

OTHER ESTROGEN-RECEPTOR MODULATORS—Raloxifene *(Evista),* recently marketed for prevention of postmenopausal osteoporosis (*Medical Letter* 1998; 40:29), has also been reported to decrease the incidence of breast cancer, without increasing the incidence of endometrial cancer (Cummings SR: *Proc Am Soc Clin Oncol* 1998; 17:2a, abstract 3). Its long-term safety is unknown.

CONCLUSION—In one large study, tamoxifen taken daily for a mean of about four years decreased the incidence of breast cancer in women with a family history of the disease or other risk factors. The drug increased the incidence of endometrial cancer, pulmonary embolism and stroke. Women more than 60 years old with no other risk factors did not show a decrease in breast cancer with tamoxifen, and they were more likely than younger women to have adverse effects. Presumably the drug would have to be taken indefinitely, and its long-term effects on mortality are unknown.

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Fraud Bounties Bad Idea for Medicare

OP-ED published in the *New Haven Register*, 17 March 1999

TIMOTHY B. NORBECK

THE federal government and the American Association of Retired Persons (AARP) staged a nationwide Medicare beneficiary event on fraud and abuse last month. Its purpose was to enlist Medicare patients to contact a toll-free hotline if they suspect any improper billing by their physicians, hospitals, or other health-care providers. On the surface, this effort appears to be a noble and worthy one. After all, who among us condones fraud and abuse? This attempt by the federal government, however, to deputize our elderly to root out fraud in return for a $1,000 bounty, is even more harmful than it is ludicrous.

There has been no bona fide effort by the Health Care Financing Administration (HCFA), which administers Medicare, to distinguish between real fraud and honest differences of opinion in interpreting Medicare's hideously confusing and complex regulations. In fact, those arcane regulations and red tape imposed by the government on physicians and other caregivers number an ever-changing 100,000 pages!

The federal government estimates that improper Medicare payments totaled 12.6 billion dollars last year, but admits that it could not specify how much of this was attributable to fraud, rather than to unintentional billing errors. Unbelievably, that figure of 12.6 billion dollars is based on a review of claims that were filed for a mere 600 Medicare patients. That small sample amounts to 0.0015% of Medicare's 39 million beneficiaries.

Not only is this heavy-handed and cynical government fraud and abuse effort injurious to the patient/physician relationship, it also plays to the worst fears of many older and chronically ill patients. Rather than attempting to isolate and take action on legitimately documented cases of fraud, the federal government's solution is to ask patients to solve the problem by actually policing their own caregivers

Examples of Medicare fraud include the intentional use of a provider number for a deceased or defunct provider, or billing for services delivered after a patient is dead. Such blatant fraud should be dealt with swiftly and appropriately, and no one argues with that. But unintentional coding errors, and continuing to bill for services rendered to a patient who is alive—even though the government's own Medicare computer has falsely declared that patient dead – are not examples of fraud. And we worry about the Y2K problem!

The government must recognize its own culpability. It should simplify the ridiculously vast number of rules and regulations. It should correct its own faulty database. It should help educate physicians and Medicare patients instead of tormenting them.

The medical profession and medical societies and associations everywhere have zero tolerance for willful fraud in the Medicare program or any other program. Unfortunately the federal government and HCFA give little latitude to physicians and other caregivers who are easily and understandably confused by Medicare's 100,000 pages of government gobbledegook.

How can elderly Medicare patients, or any patients for that matter, be expected to remember all of the times, types, and number of services rendered? How can a patient know about the pathologist who, unbeknownst to him or her, examined a tissue specimen in the private setting of a laboratory? How can patients be expected to know about the services rendered by a doctor he or she may never see, such as the radiologist reading an X-ray? There are many other examples. To enlist elderly Medicare patients in this heavy-handed effort to examine bills and root out Medicare fraud – while dangling a $1,000 carrot as a reward – is an invitation to disaster. Demeaning and insulting as it is to physicians and other caregivers, it will seriously drive a wedge into the patient/physician relationship and the trust inherent in that relationship necessary to help those patients.

It has been said, "the road to Hell is paved with good intentions." I know of no better example of that than this ill-conceived Medicare vigilante project. The federal government and HCFA should accept the American Medical Association's invitation to sit down together and work out a plan to accomplish what everyone wants – to root out real fraud and abuse – without undermining the trust needed for effective medical care.

TIMOTHY B. NORBECK, executive director, Connecticut State Medical Society, New Haven.

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The Physician as Poet

Meditations During Recovery

The scar is long and angry; drawn by scalpel:
A track of violation from xyphoid to pubis,
Underscoring life's needs, while often simple,
Can be agonal. Breathing is now a ratcheted crisis:

A continual seesaw of stabbing concomitant—
As is attempted turning from side to side.
Eating, a gourmet thing at times, now deviant:
As feeding's a diurnal pricking of skin, a slide

Of fluids down plastic conduits, in allotted doses.
Sleep, once dream-filled, now drug-swayed, fitful.
Tomorrow is on hold—dangling on prognosis.
We are impaled on Necessity's rule.

We titrate our wounds and the measure
Of their repair, to time's allowance;
Await the decree: balm or despair—
Debate the slant of the uncertain balance.

We are neither victims nor principals:
Children of chanced transformations
Who have evolved in a swirling carnival
Of circumstance, mid a racing migration

Of galaxies, love child of clamorous Chaos
And amorous Animus. We are here.
We hurl our words to the stars, the cosmos—
What audience would we commandeer?

The armor we wear is meager, fragile,
Prone to decay. Foremost of our panoply—
Above all—is self-scrutiny: the scales
Of guilt, remembrances, sighs; the melancholy

Disquietude of disrupted beginnings.
We feed at the teat of Time whose milk runs
Quickly dry. About the campfires, we lean huddling,
Sweating the impending onslaught of oblivion;

Our citadel: the commonality of anguish.
We attend the nature of our wounds,
Defiantly, defend our unknown purpose;
Watching for an eastern star, a vision crowned.

Nicholas Giosa, M.D.

CALL FOR PAPERS

Members of the Connecticut State Medical Society reading papers before other organizations are invited to submit their papers to the *Journal* for consideration. Authors preparing manuscripts for submission to *Connecticut Medicine* should consult **Information for Authors**. This is published in most issues of *Connecticut Medicine* or may be obtained from the *Journal* office. Adherence to the instructions will prevent delays both in acceptance and in publication.

Papers prepared on a word processor should be submitted on a diskette along with the hard copy.

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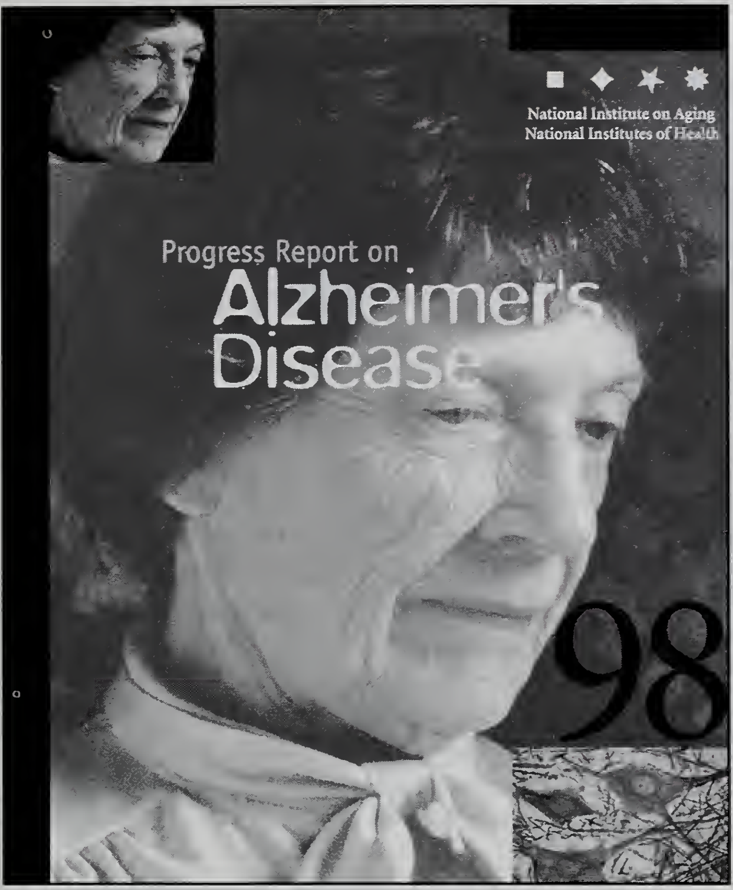
DRUGS DON'T WORK!℠
Governor's Partnership For Connecticut's Workforce

The Governor's Prevention Partnership, and the Connecticut Coalition to Stop Underage Drinking, have joined together with health-care providers across the state to launch a campaign designed to reduce underage drinking. The Champions For Youth campaign was created to mobilize communities across the state to reduce youth access to alcohol, increase enforcement and raise public awareness about the dangers of underage drinking. Sponsors of the Champions For Youth campaign include hospital executives, HMOs, the Connecticut State Medical Society, the Connecticut Hospital Association, and the Connecticut Chapter of the American Academy of Pediatrics.

According to state and national data, Connecticut's young people have a drinking problem. Connecticut is ranked 10% higher than the national average for youth alcohol use, and children are using at earlier ages—as young as 11 years old! Additionally, data also indicate that underage drinking is top-of-mind among Connecticut residents. In fact, a startling 96% of adults indicated they are concerned about the issue. This campaign is designed to help people move from talking about the problem to taking concrete action to solve it.

The Champions For Youth campaign was launched during April, which has been designated by Governor Rowland as Underage Drinking Prevention Month. Healthcare providers will host community forums, write editorials, and sponsor a billboard campaign. Waterbury Hospital and St. Mary's Hospital have teamed up as a result of the campaign and are collaborating on a liability forum to be held in early inlay. Stamford Hospital will also be participating in a community forum in the middle of May. Physicians around the state, such as Dr. Jeff Cersonsky of Southbury and Dr. Francis Walker of St Francis Hospital, have demonstrated their support of the initiative by submitting op-eds to local and regional newspapers. Champions For Youth kits which include a video, a Connecticut Coalition brochure, a fact sheet, pledge sheets, and a planning guide may be ordered by calling the Connecticut Coalition to Stop Underage Drinking at 1-800-422-5422, Extension 14.



Piecing Together the Alzheimer's Disease Puzzle

NIA Issues 1998 Progress Report

In releasing its *Progress Report on Alzheimer's Disease, 1998*, the National Institute on Aging (NIA) describes how pieces of the Alzheimer's disease (AD) puzzle are coming together. During the past year, researchers at and scientists funded by NIA and eight other National Institutes of Health contributed findings from their search for the disease's causes and effects at the molecular, biochemical, and neurological levels.

The *Progress Report on Alzheimer's Disease, 1998*, highlights AD research in three broad, overlapping areas: causes/risk factors, diagnosis, and treatment/caregiving. This report provides information about genetic factors in AD; and summarizes scientific advances in understanding, diagnosing, treating, and preventing AD. It also includes a research outlook for the coming year and a list of 95 references.

NIA is offering single, free copies of the 58-page, annual research highlights to the public and health professionals who call NIA's Alzheimer's Disease Education and Referral (ADEAR) Center, toll-free, at **800-438-4380**. Single, print copies also are available by writing:

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The full text of the *Progress Report on Alzheimer's Disease, 1998*, is on the ADEAR Center's Web site at:

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NIA is the Federal Government's lead agency in the search for the causes of and treatments for AD.

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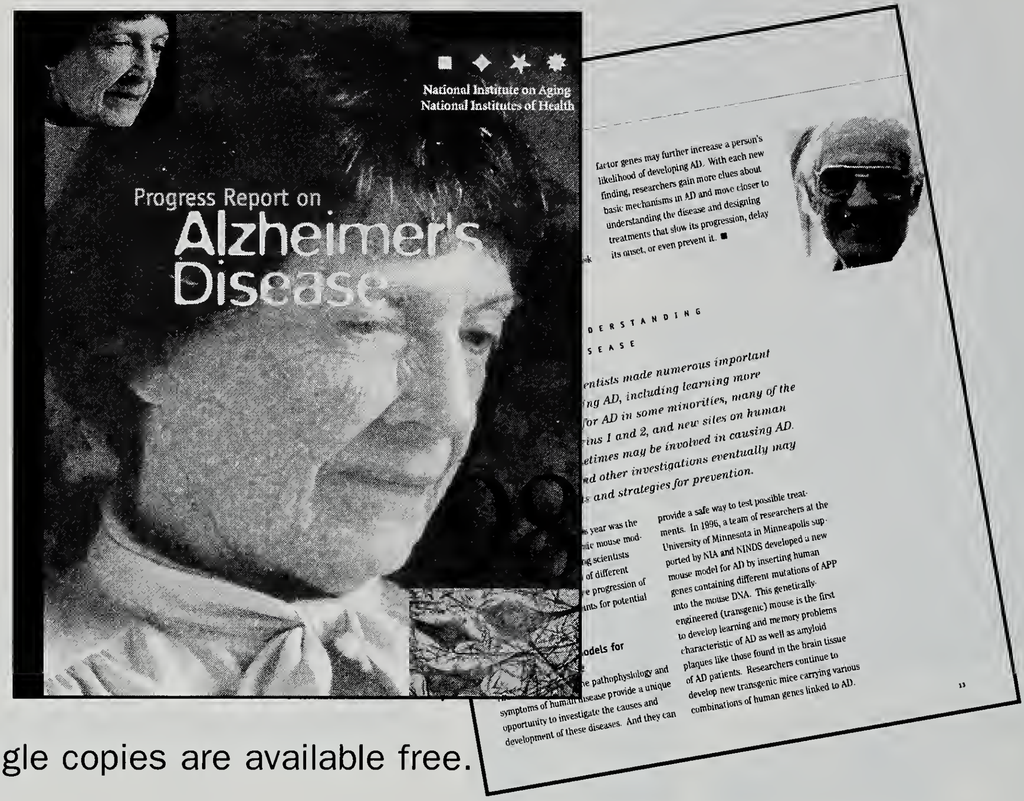

factor genes may further increase a person's likelihood of developing AD. With each new finding, researchers gain more clues about basic mechanisms in AD and move closer to understanding the disease and designing treatments that slow its progression, delay its onset, or even prevent it. ■

provide a safe way to test possible treatments. In 1996, a team of researchers at the University of Minnesota in Minneapolis supported by NIA and NINDS developed a new mouse model for AD by inserting human genes containing different mutations of APP into the mouse DNA. This genetically-engineered (transgenic) mouse is the first to develop learning and memory problems characteristic of AD as well as amyloid plaques like those found in the brain tissue of AD patients. Researchers continue to develop new transgenic mice carrying various combinations of human genes linked to AD.

Single copies are available free.

To receive the ***Progress Report on Alzheimer's Disease, 1998*** (publication number Z149), by mail, complete this form and fax (**301-495-3334**) or mail it to the:

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Commentary

The Punishment

My father worked in the civil service of the Government of India. As was true of all high ranking civil servants, he was moved from station to station every few years. This practice had been set up during the British Raj in an effort to prevent our English masters from becoming too cozy with the natives. Rules and regulations had ossified long ago and the indigenous Government of India rigidly clung to the procedures set up by our white rulers of almost half a century ago. We moved with him every five years or so and faced new schools, new friends, and often new languages. India is a crazy quilt of a country, more a notion than a nation. It has 16 major languages belonging to three linguistic groups, several thousand dialects, and countless ethnic groups. Most languages have their own scripts, syntax, and grammatical structures, so that few Indians can communicate with one another from even an adjoining state. When I was growing up, the only common mode of communication that held us together was the one invaluable legacy the British left us—the English language.

I was born in Tanjore, in the southern state of *Tamilnadu* and spent the first 10 years there. The medium of education at the very first school I went to was Tamil, my mother tongue, which made my life easy. When I was 10 we moved to Calcutta, and most schools taught their students in Bengali, the local language. My parents saw the writing on the wall—that my father was unlikely to be posted again in *Tamiluadu* and that my education may be jeopardized by having to learn a new language every few years. They decided to send me to an English medium school, so that at least the language if not the content of my future education could be held constant. In order to facilitate my learning curve, my parents decided that we would all talk in English at home. It was a traumatic decision for me, who had no facility for language. With the innate conservatism of the young, I was unwilling to change from the comfort of my mother tongue, Tamil, to this exotic foreign language. Suddenly, I turned from a bright talkative youngster into a withdrawn sullen child.

We moved in midsummer, so that we could get settled before school began. My mother scouted the curriculum in the school I was scheduled to enter and found that the level of geography was more advanced than I had been taught at my last school. My parents decided that she would coach me at home. So we bought an English language text of geography, and began to go through it together. She taught me about meandering rivers gouging out the primordial land, and continents, and stalagmites and stalactites, and oceans, and land masses. She taught me to remember about imports and exports of countries and their seats of Government. She knew about the Hague and streets of Tokyo, and the pampas and steppes and the Scottish Highlands, even though she had never left India. She loved geography, and I think that she found me wanting. In my defense, the combination of a new language and a less than captivating subject left me distracted most of the time. Through the course of the teaching project, she grew increasingly frustrated.

Then one day, she was boiling water and I watched with fascination as the kettle came to a boil and the steam rose in wispy clouds from the spout. She had been trying to teach me about rain and clouds and asked me where the water vapor in the clouds came from. I kept staring at the kettle and said, "From boiling water." Her eyes followed my gaze and she asked in wonder, "Are you telling me that all the water vapor in the clouds comes from my water kettle?"

"Well," I said. "There must be a thousand kettles boiling water all over."

Somehow this exasperated her more than anything I had said over the past few weeks of our shared labor. She said, "I give up. I am going to tell your father I just can't teach you anything."

My father worked very hard at his job. High ranking civil service positions in India were often sinecures, but my father took on his job with a missionary zeal. He wanted to leave his mark on the "service," as he called it. He devised better ways of doing things, of reducing paperwork, of expediting tax assessments and returns. I don't think anyone paid much heed to the proposals he put forward, despite the fact that they were probably polished, reasoned, and reasonable. The bureaucracy of India is justly renowned for tenaciously protecting the status quo, and my father's superiors in the Government probably found him a nuisance. He left for work before I got up and returned when I was ready for bed. He was a distant presence for most of my early life. If I misbehaved at home, my mother would threaten that she would tell *appa* when he came home. It always worked. I knew him so little and he seemed to be such a stern, remote presence that the threat of his retribution seemed not worth risking.

I waited all that day in an agony of anticipation. While she had threatened to tell on me on any number of other occasions, the conflict had always resolved itself before. Somehow this was a more serious infraction—in a South Indian Brahmin family, lack of seriousness about one's studies was not a trivial offense that could be glossed over. I knew that I was going to get it.

When my father came home, I heard my mother talking to him; I heard my mother mention my name. After a while, my father went out to the verandah and my mother called me and told me that appa wanted to talk to me.

I went out to the verandah apprehensively. My father was sitting in an easy chair and staring into the gathering Indian dusk. Our flat was on the fifth floor of the apartment complex, too high for mosquitoes to fly up to and we could sit outside fearlessly. Way down, on the street below, my friends Gopal and Mohan were meticulously letting the air out of all the tires of our neighbor Mr. Sharma's jeep. The air was redolent with the smell of fresh water fish, the Bengali staple, being fried in fragrant mustard seed oil.

Dusk is long and mournful in tropical lands and full of screeching flocks of birds flying seemingly aimlessly hither and thither. Smoke arose from a thousand household charcoal stoves and hung in the air in a pall. It was so thick that we could barely see to the end of the street. In the flat below, my friends Malini and Kalyani, sisters and coconspirators in the murder of South Indian classical music, were practicing tunelessly and listlessly. They hated to practice, they hated classical music but they were too obedient to tell their mother so. Children fought and screamed and laughed all over in the high-rise building, full of young families like ourselves, full of preadolescent children in an era before television, when all you had to occupy your time was your imagination and the endless opportunity to torture your siblings. The pale yellow light of the street lamp shone onto our verandah and lit the scene of a fearful 10-year-old, waiting for the boom to lower, for his father to punish him for his not paying attention to his geography lesson, for not knowing that the water in the clouds came from evaporation from the seas and the lakes, not from housewives boiling water in their kettles.

My father sat there and said nothing. After avoiding looking at him for a long time and occupying myself observing every detail of the mischief Mohan and Gopal were up to, I finally turned cautiously towards him. He looked at me, a little sadly. He seemed unsure of what to say.

"Don't you understand geography or English?" he asked. "Is it too difficult?"

"No," I replied. "I understand it. It is boring."

"Well," he said. "You have to learn it. You are a smart boy and I expect a lot from you."

I did not know what to say. Do I tell him that I thought that I did not understand why I had to learn about granite and rainfall when I wanted to be a doctor? "Yes, appa," I said.

He put his arm out to me. I went closer and he put his arm around me. I stood close to him. A flock of bright green parrots with red beaks swarmed out of a *neem* tree, dipped a little to be almost abreast with us, banked around the corner of our building, and disappeared. They moved with fluid grace, like a drop of mercury shimmering across the floor, as though they were a single organism rather than a thousand individuals. For a moment, they seemed so close to us that we could have reached out and touched them, but before we could react, they had flown away. Kalyani and Malini, mercifully for themselves and all of us within earshot, finished their practice for the day. All around us mothers were calling for their children to come in from their play for dinner. It was growing dark suddenly and the buildings around us had lost dimensionality and were silhouettes against a darkening sky. On the street below, Mr. Sharma ran out of his flat yelling at Gopal and Mohan. "Why do you keep doing this naughty thing, you bad boys?" I heard him shout. "I am going to tell your fathers. You bad bad boys." He circled his jeep angrily, waving his arms over his head. It seemed comical and I looked at my father. He smiled and I broke into a grin. I wondered if he knew that were it not for the fact that my mother had kept me home to be chastised by him on his return, I would have joined Gopal and Mohan in their mischief.

"Raju," my mother called. "Tell your father that dinner is ready."

We looked at each other and went into the flat.

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50 Years Ago

From *The Connecticut State Medical Journal*

May 1949

Cancer in the Lactating Breast

PHILIP G. McLELLAN, M.D., *Hartford*

CARCINOMA of the lactating breast, although a tragic disease, is such a small part of the overall problem of breast cancer that very few clinics can accumulate enough cases to be of any great significance. Harrington[1] in the largest series reported to date found 92 such cases in 4,628 cases of carcinoma of the breast—an incidence of 2 per cent. Other lesser series range in incidence from two to four per cent.[2,3] At the Hartford Hospital from 1918 to 1946 there were 14 such cases in 1,359 primary admissions for breast carcinoma or an incidence of 0.9 per cent. This compares favorably with the 0.8 per cent incidence reported by the Connecticut State Department of Health[4] in an analysis of their 5,213 cases of breast carcinoma and as an unselected group probably represents a more nearly true incidence rate.

One has but to review the literature to realize the existing confusion as to treatment of cancer of the lactating breast. Haagensen and Stout[2] in 1943 considered it categorically inoperable from a study of their series at the Presbyterian Hospital. In Haagensen's most recent article[5] he modifies this stand somewhat on the basis of Harrington's report of 61.5 per cent five year survivors when the disease was limited to the breast, suggesting that his own series may have been a particularly unfortunate one and suggests that … "Radical mastectomy is justifiable in these patients, provided, of course, that the disease is locally operable." Behan[6] in the text *Cancer* quotes many authorities pointing to a rather uniformly unfavorable prognosis. Pack and Livingstone[7] in their treatise on cancer published in 1940 agree that the whole subject needs further study after a review of 22 cases at the Memorial Hospital. Hertzler[8] in his Pathology of the Mammary Gland dramatizes the subject in this manner: "I shall not forget the first patient I saw thus afflicted. Demonstrating such a case, a distinguished surgeon of maturer years, after the patient carrying her four months' old infant had been led from the room, turned to his audience and remarked, 'Gentlemen, who wants to tell this young mother that in six months she will be dead?' … It is doubtful if any lactation cancer has been cured. Grievous errors are chiefly at the expense of the surgeon and he often elects to operate. The facts are: if malignant, operation is useless." With this introduction may we present our first case:

A 38 year old mother of three children was admitted in labor. A 6 x 5 cm. mass was noted in the upper outer quadrant of the right breast. Eleven days after delivery an aspiration biopsy proved unsatisfactory. Two days later an incisional biopsy was followed by radical mastectomy. Recovery was uneventful and she has received no further treatment. Examination today, eight years later, shows no evidence of carcinoma. (Patient and son presented.)

A gravida 9, para 8, 44 year old was admitted June 25, 1933 having noted a tumor in her right breast 11 months previously while nursing her last baby. A biopsy followed by radical mastectomy was performed. The specimen showed carcinoma with axillary mestastases (Grade 2) in a lactating breast. She received no other treatment and remained well until she was admitted 13 years later with symptoms of a brain tumor. Operation revealed inoperable cerebral metastases. No local or other metastases were found. She died nearly 14 years after her original radical mastectomy of this brain metastasis.

A housewife of 23 had noticed a tumor in her left breast for one year. At the time of admission she was two months pregnant and had noted engorgement of her breasts. Biopsy of a suspected fibroadenoma proved carcinoma so that radical operation was

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done. Pathological report showed Grade 1 carcinoma without axillary metastases in a breast tissue compatible with pregnancy. No other treatment was given. She has subsequently in 1934 and 1939 been delivered of normal full term babies and at present, 16 years later, continues free of any evidence of carcinoma.

Eleven of our cases ran a uniformly unfavorable course. The average for this group would be a female of 32 years (26–43) with a nodule present for six months (2–15) who was treated by biopsy + irradiation + sterilization or combined radical operation + sterilization + high voltage x-ray pre and/or postoperatively and dying of generalized metastases in 12 months (8–30) or 19 (10–37) months after the nodule was first noted. All with two exceptions were of a Grade 3 malignancy (2, Grade 2) and the type of treatment had no apparent effect on the outcome.

From a survey of these 14 cases we can arrive at a few definite conclusions. First we can reiterate the conclusion given by Dr. D. B. Wells two years ago before the New England Surgical Society that "our series justifies operation in these cases, provided there are no other criteria of inoperability." Our three favorable cases fell into this category, the majority of our eleven unfavorable cases had extensive metastases.

Earlier diagnosis might definitely improve the salvage. Of the 11 unfavorable cases the average duration of the tumor was 6 months before treatment and running from the extremes of 2 and 15 months. Only two of these cases have been admitted in the last five years (6 and 8 months delay) and it is hoped that the educational program will cut down the delay in these cases. The tumor itself is apt to be hidden by the congestion of the breast so that delay may be even more than is apparent from the history. Obstetricians and gynecologists have become increasingly diligent in having their cases seen early as illustrated by the following case which exemplifies another difficulty in diagnosis.

A 22 year old primipara was seen in the prenatal clinic with a small 1.5 cm. freely movable, superficial, rubbery nodule in the upper outer quadrant of the right breast. She was immediately admitted to the hospital and seen in consultation by the surgical staff where a clinical diagnosis of fibroadenoma was made. Aspiration biopsy was done and without history other than location of the tumor, a diagnosis of carcinoma was made. When the story was given that she was eight months pregnant, the opinion of our pathology department was divided between cellular fibroadenoma and carcinoma. The surgeons held to their diagnosis of fibroadenoma and seven weeks later following delivery the tumor was removed establishing the diagnosis of fibroadenoma. This may well have been good luck rather than good judgment, but as in the case of first case cited above the aspiration biopsy was not satisfactory, and in this case even misleading. We believe that open biopsy should be done in these early cases as soon as possible after the tumor is noted

The fact that many questions concerning treatment are not answered, should be a stimulus to us in Connecticut to study our large series of cases listed in the State Department of Health to try and arrive at a more nearly sound answer as to how to treat these cases. For instance, should the pregnancy be terminated once the diagnosis of carcinoma of the breast is made? One might well reason that with the high titre of estrogens during the last trimester of pregnancy it would be desirable to do so. This view is held by Geschickter[9] and yet F. R. Smith in a study of 22 cases at the Memorial Hospital[7] found that if pregnancy were terminated none lived over two years, but that if the pregnancy were permitted to continue and the breast treated in the usual manner, 88 per cent were living two years later. Harvey[10] doubts the value of abortion. Authorities can be quoted to justify either type of treatment.

Should a woman once having had a radical mastectomy for carcinoma of the breast be allowed to become pregnant? Having become pregnant should she be aborted or have a prophylactic mastectomy on the remaining breast? Here again we find a divergence of opinion. Behan[6] quotes Trout that in 15 patients who became pregnant after removal of a breast cancer, 13 developed cancer in the remaining breast and 12 of the 13 had a rapidly fatal course. Harrington[1] in his series of 4,628 cases of breast carcinoma tried to find the answer to this problem but lack of data available boiled this down to 55 cases of which only 37 were available for follow-up. He concluded that although the results were better than anticipated, he would continue to advise against subsequent pregnancies. He urged further study of the whole subject. Harvey[10] on the other hand believes, and I think rightly so, that there is not enough factual evidence available to be certain this advice is necessary.

What does this all add up to in outlining a treatment for these cases of cancer in the lactating breast?

In all cases we can postulate that the prognosis will not be as good as in the patient with the non lactating breast because of (1) increased vascularity (2) and in the pregnant patient increased estrogenic stimulation.

With this in mind we can suggest that if the case appears operable and after radical mastectomy and pathologic study would appear to have a favorable prognosis, no further treatment may be necessary. In other words, with the disease eradicated by excision no other treatment is necessary (as in the case of two of our favorable cases). A second factor must be considered and that is the possible influence of a subsequent pregnancy on the development of cancer in the remaining breast. This point needs further study but in our series we have no evidence at subsequent pregnancies are contraindicated in is favorable group.

In the case where an unfavorable prognosis would seem to exist we can expect a fatal outcome in the great majority of cases. Therapy can be directed towards prolonging life and making the patient comfortable. We shall still operate on cases that can be proven inoperable only after operation has been done. We would advocate early open biopsy followed by radical mastectomy in the clinically operable case rather than accept the delay necessary for preoperative irradiation which might allow the disease to extend beyond the area where complete extirpation can be done. Termination of pregnancy may appear advisable in the first half of pregnancy the doubtful case, but it is not proven, and with poor prognosis for the mother, the child may become the more important consideration. Irradiation therapy is preferrable to operation with the presence of other criteria of inoperability. Sterilization by surgery or irradiation would seem advisable. Testosterone therapy might well be a useful adjunct. Subsequent pregnancies would seem contraindicated in this group, although few live long enough to become pregnant.

Certainly early diagnosis is urged. Open biopsy followed by radical mastectomy offers the only hope for cure. Further study is definitely needed to establish a sound basis for treatment of these tragic cases.

Here is the challenge to contribute from a non selected series of breast carcinomas such as we have registered in the Connecticut State Department of Health. A projected plan of study has been made and we shall be asking your support in helping to find the answers as the study develops. We hope that with your cooperation we can contribute towards an answer as to what is the best treatment of the implications of the lactating breast intimately or remotely associated with cancer.

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75 Years Ago

From the *Proceedings of the Connecticut State Medical Society*

1924

Social Events

The genus homo is instinctively a social animal, and doctors are no exception. The social side of the One Hundred and Thirty-second Annual Meeting of the Connecticut State Medical Society was of outstanding importance. On the evening of May 28th, the members were the guests of the Hartford Medical Society at a buffet luncheon and smoker held at the Hunt Memorial Building. Vocal music of a high order by the Colonial Quartet was much appreciated.

The Board of Managers of the Hartford Club extended the privileges of the club-house to all our members during the days of the convention.

The Connecticut Women's Medical Society met for luncheon at the Business and Professional Women's Club at noon on the 28th.

Members were entertained at luncheon on the 28th by the Hartford Retreat for the Insane. The afternoon session was also held at that institution, the two events being in celebration of the one hundredth anniversary of the founding of the Hartford Retreat. This was most appropriate for the reason that the Connecticut State Medical Society played a very important part in the foundation of this institution. The Society first gave attention to the needs of the insane of the State at their annual meeting in 1813. "In May, 1822, Thomas Hubbard, Thomas Robbins, Samuel B. Woodward, John Caldwell, Isaac Spencer, Thomas Day, and their associates and successors" were incorporated by the name and style of the President and Directors of the Retreat for the Insane. Funds to the amount of eighteen thousand dollars were raised by general subscription. The State made a grant of five thousand dollars. The Medical Society appropriated six hundred dollars, all of its available funds. Land was purchased January 7, 1823. Buildings were erected and made ready for the reception of patients April 1, 1824. The Board of Medical Visitors, composed of six members of the State Medical Society, has continued in a line of unbroken succession since the founding of the institution. The luncheon on the wonderfully beautiful lawn of the Retreat was a brilliant affair. Guests were present to the number of over 250.

On the evening of the 29th was held the annual banquet of the Society. The guests assembled early at the Hartford Club, where they were entertained by a fine program of orchestral music. Two hundred and fifty-two sat down to the banquet.

Because of the striking disclosures of the Grand Jury during the preceding year, it was the endeavor of those in charge to idealize the practice of medicine as it should be, as over against commercialized practice as exemplified particularly by fraudulent irregulars and quacks., To this end the Committee of Arrangements had chosen as the subject of the literary exercises "Truth or Falsehood in the Practice of Medicine?" and the following program was carried through, except that at the last moment both Dr. Finney and Dr. Angell were unable to be present. Their places, however, were splendidly filled by Dr. M. C. Winternitz, Dean and Professor of Pathology at the Yale School of Medicine and by the Honorable Benedict M. Holden, Foreman of the Grand Jury investigating medical frauds.

LITERARY EXERCISES

GRACE — Rev. Remsen B. Ogilby, LL.D., Litt.D.
President of Trinity

NECROLOGY — Charles W. Comfort, M.D., Secretary

"Only the actions of the just smell sweet and
blossom in the dust."—Shirley.

GREETINGS — Elias Pratt, M.D.
President of Conn. State Med. Society

"The sauce to meat is ceremony."—Shakespeare.

Reprinted from the *Preceedings of the Connecticut State Medical Society*, 1924.

FORTISSIME VERITAS John M. T. Finney, M.D.
Professor of Surgery
Johns-Hopkins University

"For what doth the Lord require of thee, but to do justly, to love mercy, and to walk humbly before the Lord thy God."
—Micah.

LUX ET VERITAS James Rowland Angell, Ph.D., LLD.
President of Yale

"If you can look into the seeds of time and tell which grain will grow and which will not."—Shakespeare.

QUI TRANSTULIT SUSTINET Charles A. Templeton
Governor of Connecticut

"With malice toward none; with charity for all; with firmness in the right, as God gives us to see the right, let us strive on to finish the work we are in."—Lincoln.

DEUS MEDICI The Toastmaster

Dr. Ernest A. Wells acted as toastmaster and held the speaking on a high plane of dignity and literary excellence. He stated the position of the regular profession in the present crisis as follows:— "Not one iota do we ask from Capitol Hill for our own personal and economic good. No lobby have we ever maintained there for that purpose, and, though well able, please God, we never will. That great heritage of tradition which we have received of our fathers through all the ages, we, as 'Trustees of our posterity,' are determined to preserve untarnished and undiminished. Ours is an idealistic profession. It shall remain so. 'Too low they build that build beneath the stars.' Very well then, we will heave up the mighty structure of our idealism till it overtops the stars. 'The noblest motive is the public good.' The people trust us. We will not deceive them."

The program closed with the "Deus Medici," which appears elsewhere in this issue. The gallery of the hall was open to ladies. This was an approved innovation. The program was long, but interest was so sustained that scarcely a man left the hall until the close of the exercises at 11:30. It was felt by all that a deal of good sentiment was crystallized and a fine idealism sustained at this dinner.

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FROM THE EDITOR'S DESK

Data, Documentation and Trust

Elsewhere in this journal our Executive Director, Tim Norbeck, rails in appropriate high dudgeon against the proposal by HCFA to offer financial rewards to Medicare patients for ferreting out evidence of billing fraud by their doctors. In the book reviews our physician colleague, Richard L. Reece, M.D., poses the question to himself, and to us, "Why don't physicians spend as much time managing the "art" of medicine as they do managing the "business" of medicine?" Might we find the answer to this question, faintly obscured by the facts, in the first sentence?

While editorial brevity would perhaps be welcomed, I have more to say. My thoughts are simultaneously along two tracks: first, the rising fascination with and insistence upon data and documentation in our culture, and in our profession; second, the erosion of trust amidst and between those same spheres of human endeavor. Let it be stated emphatically that none of us in the practice of medicine should countenance a purely subjective or anecdotal approach to the care of patients, nor should we excuse sloppy billing or record-keeping habits by our colleagues. Though far from a pure science, medicine depends heavily upon scientific advances and our deference to science as a guiding force has given rise to the field of "evidence-based medicine." To think, though, that a rigid scientific protocol can be established and found practical for the care of patients with all disorders, of all degrees of severity, in all age groups, with appropriate time and billing delineations for each requires more intellectual muscle and more faith in statistics than this physician can muster.

I recall the lament of one of our modern-day sages in medicine, the late Dr. Franz Ingelfinger, distinguished gastroenterologist and editor of *The New England Journal of Medicine*, as he faced esophago-gastric cancer. Himself a human compendium of facts and data on the subject, amassed through a lifetime of clinical and investigative work, his consultants brought more facts and data for him to assimilate. Reflecting later on that assimilation process he concluded that what he really needed was a doctor, one who knew him and understood his tolerance for risk, his values and his expectations, one who could help him make difficult choices in the face of a dread disease. I cite this as a real life demonstration that after all the evidence is in, the dialogue between patient and doctor at a human level is still pivotal to effective decision-making in health care. In that dialogue there is no substitute for empathy, compassion, the art of medicine. Most of all, that dialogue is empty without trust.

A physician friend of mine, greatly admired by me and others, is fond of quoting the currently popular aphorism, "If it isn't written down, it didn't happen." On the surface it forms the perfect caveat for everyone in healthcare to abide: document—document—document. At a deeper level though, with the proliferation of forms, certifications and advance approvals, signatures and co-signatures, rigidly constructed privilege delineations and levels of care, the written record becomes the only acceptable representation of the value of doctor-to-patient. The doctor, beset with documentation mandates and severe time constraints is finding the need to encroach on human time to fulfill documentation time. Documentation lapses or absences from the record, seen, for example, with unsigned informed consent slips, beg the assumption on the part of an enlarging cadre of observers that the discussion of diagnosis, prognosis, modes of treatment, risks and complications just didn't take place between patient and doctor. Must we begin with a bias of mistrust in the integrity of practitioners, that they are cold-hearted, self-serving purveyors of a trade, neglecting the fundamental human needs of their patients as evidenced by an unsigned sheet of paper? Has trust between patient, doctor and society been so severely eroded in the onslaught on paternalism that it cannot be assumed that this essential discussion did take place, perhaps at great length, and the paper, for whatever reason, just didn't get signed? Guilty until proven innocent—patients and payors policing their doctors, record keepers policing the flood of documentation requirements as more laws and regulations are promulgated. And if amidst the time constraints responsible physicians are forced to truncate their face-to-face interactions with patients, and with colleagues, interactions where trust is born and nurtured, what is to become of trust?

H. David Crombie, M.D.
Editor

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Surely There Is a Better Way

ROBERT U. MASSEY, M.D.

SOME years ago Stewart Hamilton and I were discussing some matter relating to the affiliation between the University of Connecticut's School of Medicine and the hospitals in the Hartford-New Britain area. Dr. Hamilton was president and general director of Hartford Hospital then, so this had to be before 1976. (Incidentally he recently was inducted into the Modern Health Care Hall of Fame.) I have long since forgotten the rest of our conversation, but I do recall clearly a remark he made, "When the talk comes to money all other values fly out the window."

Several events reported in the Hartford *Courant* last month were evidence of this conflict between money and values in medical care. One was a story not unfamiliar to middle-aged couples upon whose shoulders must be borne the care of an increasingly disabled aging parent. Two quotations from the first article suffice: "Do you really think doctors, hospital, and other providers could charge the prices they do if they had to rely on payments from our wallets, as do plumbers, accountants and stores? No way."

The second quote: "If you are poor enough in the United States, everything's free (or paid for by Medicaid). If you have assets, the system does its best to shed you of them rapidly. Either way the care is lacking or inconsistent."

The other article, a column by Tom Condon, began: "If we can't make health care affordable for senior citizens and others, the least we can do is help them deal with bill collectors." He then tells a depressing tale of a couple who, in their 70s and overwhelmed by medical bills, had been pursued by a collection agency and lawyers who attached their $150 savings account, even though under the state's Fair Debt Collection Practices Act their account may have been exempt. In addition the sheriff's fee to attach that account was $228, the bank's fee was $30 dollars, and the bounced checks $200. The couple—he is an Army Air Corps veteran of World War II—understandably felt terrorized. The good news was that, since all this has happened, the lawyer and the collection agency have been called off, the bills consolidated, and the couple will be helped to apply for a hardship exemption. A better ending, to be sure, but I can imagine a 75-year-old sick man feeling suicidal with a mess like that dumped upon him. Institutions dedicated to providing medical care ought rarely, if ever, to be engaged in such inhumane pursuits. But when the talk comes to money....

In an earlier and better time, that would rarely have happened, and if it had, our profession and our hospitals and clinics would have shamed and shunned the perpetrators. But then bills rarely reached the magnitude they do now, and most of us and our institutions, at least in my experience, expected payment for no more than two thirds of our work anyway. The large medical group practices generally had financial advisors for patients who had difficulty paying, often arranged workable monthly payment plans, and not infrequently marked the bills "paid in full" if the payments had been met for a year or two. Often the bills were canceled without asking the patient to go through the rigmarole of applying for a "hardship exemption."

The one exception I recall was that of a psychiatrist friend who asserted that in his specialty the payment was part of the therapy! He spoke truer than he knew: it is almost always part of the therapy!

Therein lies our problem, or so it seems to me. A self-correcting market does not exist in medical and hospital care, or at least not for most of us. I do know several families, self-employed with modest incomes, who have decided not to buy health insurance but rather have put aside money earmarked for medical bills. Their decisions to incur medical costs are carefully weighed against alternative uses for the money. But without catastrophic insurance this can be a dangerous game, not for everyone.

The HMO onslaught was touted as a way to reintroduce market forces into the system; but of course it doesn't work because the purpose of a health-maintenance organization is not health maintenance or quality of care at all but to provide profit for stockholders and millions for CEOs. And the HMO dollars have increased demand because most of us have come to believe that we have a right to virtually free care. That first happened when

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ROBERT U. MASSEY, M.D., Professor Emeritus, Division of Humanistic Studies, Department of Community Medicine and Health Care, University of Connecticut School of Medicine, Farmington.

Medicare, at the time a modest proposal, entered the field in 1965; HMOs have simply extended the coverage, competing for health-care dollars, slowing inflation for a few years, but now the curve is again ascending

Health expenditures in the United States were relatively flat during the 20 years following World War II. In fact, as a percent of the GNP, they rose from 5.1% in 1933 to 5.3% in 1965 when Medicare entered the scene. They now are nearly 15%. According to the American Hospital Association, cost per hospital admission doubled in the five years after Medicare ($316 to over $600 in 1970), and more recently in 1995 stood at about $9,200, a 15-fold increase in 30 years! Per diem costs averaged $40 when Medicare entered the scene and rose to $967 in 1995, a 24- fold increase! When too much demand and too many dollars pursue goods and services, especially when those goods and services are oversold, prices skyrocket. Maybe somewhere there is an equilibrium point; many of us back in the 1980s put it at around 10% of the GNP. There are twice as many physicians per 100,000 population as there were 40 years ago; yet doctors work almost as long hours, but spend less than half as much time with each patient.

Re-invoke the invisible hand of Adam Smith? As the economist Kenneth Bolding wrote with some conviction, " The natural price system ...is a system of mechanical equilibrium and is in a very real sense a kind of celestial mechanics of the social system." Is there a defensible reason for health-care costs to rise faster than the rate of inflation? What if, in our commendable efforts to regulate the HMO outfits out of business, we limited premium costs to the rate of inflation? What if physicians and hospitals were to provide the care they thought necessary without consulting some faceless entity at the unfriendly neighborhood HMO, and either wrote off the cost, as we used to, or sent a bill tailored to the patient's ability to pay? A physician, quoted by the *Courant* last month, asserted "What is lacking is a means of reimbursement for the time and effort necessary to afford better pain relief for our patients." Do HMOs really forbid adequate treatment for pain? Or just not pay enough for it to make it worth while?

Another economist, M. Feldstein, in 1981 recommended requiring a large deductible for health insurance, up to 10% of a family's yearly income. Limited to those more than 100% above the poverty line, this might work wonders in putting the brakes on medical and hospital care inflation, but, although in my view an attractive solution, it would be politically difficult to implement.

We have shied away from carefully defining objectives, a strategic plan for preventing disease and caring for the sick. It seems to me that such an objective should be reaffirmed in the preamble to every plan proposed: universal, adequate care, no exceptions, at a sustainable cost. In such a system, not everyone with back pain gets an MRI; not every post-op patient has electrolytes and a portable chest film daily; and all frills (each of us can make up a fairly lengthy list) are at the patient's expense. And rather than trying to come up with some top-heavy federal plan each state should go at it on its own.

But there is a problem here; politicians alone will never find solutions since they have limited understanding of the problem. Medicine, or rather the health professions, their educators and administrators, their economists and ethicists, must lead the way but cannot do it alone; they must coach our political masters. We made such an effort several years ago in Hartford County, and initially excluded representation from the insurance companies; we seemed to be getting somewhere, but then, I suspect under pressure from the insurance crowd and the momentum of the Jackson Hole group, the committee lost heart and the meetings came to an abrupt end. The overly complex Clinton plan followed, but evoked too many antibodies and failed as it deserved to. The HMOs have had the field to themselves since, but surely their days are numbered. It is time to go back to work.

MEDICAL NEWS CAPSULES

This Month's Reading in Review

TIMOTHY B. NORBECK

Insurers, managed care plans and business groups are waging a determined campaign to block patient-friendly medical necessity language from becoming law.... Leading the charge is the Health Insurance Association of America.... It's interesting how, in attacking the provision, the HIAA cites figures claiming that only a tiny number of treatment decisions, about 3% overall, ultimately are turned down by health plans these days.... A medical necessity provision, it scoffs, is a "solution in search of a problem".... But if the numbers—which appear to indicate that doctors overwhelmingly are doing the right things anyway—are indeed so small, how much strain on the system would the changes really cause? (Tellingly, the figures reveal a significantly higher rate of initial rejections, suggesting that some plans are using a just-say-no first response that supports the need for patient protections.)

American Medical News (5 April 1999)

HMOs around the country recovered somewhat in 1998 from steep losses in 1997, and while the worst might be behind them, many are expected to safeguard their recoveries by hiking premiums up to 20% this year.... Employers had hoped that as HMOs cleared the red, "the pressure to raise premiums would ease".... Just the opposite seems to be the true: as HMOs' profits climb, "premiums jump.... Buyers around the country are feeling the pain."

Denver Business Journal (12 April 1999)

International financier and philanthropist George Soros has announced a $15 million pledge to a "new program to de-emphasize profit in medical care, develop altruistic service programs for young doctors and encourage consumer groups to join with physicians" in quality monitoring efforts.... In a text prepared for the announcement at Columbia University's College of Physicians and Surgeons, Soros said: "Health care companies are not in business to heal people or save lives; they provide health care to make profits. In effect, in the necessary effort to control health care costs through the market mechanism, power has shifted from physicians and patients to insurance companies and other purchasers of services".... The money will fund research and lectures "on the role of professionalism and ethics in modern medicine," and for "young doctors to learn how to provide medical services to patients outside the medical midstream, like new immigrants or the homeless."

New York Times (15 April 1999)

Ah, Beautiful Dreamers: Three out of four college students expect to become millionaires, says a poll by consulting firm KPMG, New York.

Wall Street Journal (25 March 1999)

"The insurance lobby is already embarked on a media blitz to defeat any new regulations as too costly. But consumer protections under the Democratic plan would increase health plan costs by only a tolerable 2.8%, according to Congressional Budget Office estimates made last year, or slightly more if lawsuits against ERISA plans are permitted in state court. Health plans should be made to deliver what they promise their enrollees, and held accountable when they fail."

A *New York Times* editorial (10 April 1999),
supporting new patient protection regulations.

"Disdain for HMOs apparently is an unofficial part of the curriculum for students at U.S. medical schools, according to a recent survey reported in the March 25 issue of the *New England Journal of Medicine*. Students and faculty members surveyed by Harvard Medical School and Harvard Pilgrim Health Plan (a nonprofit HMO), strongly favored traditional fee-for-service medicine over managed care, citing advantages in allowing access to care, minimizing ethical conflicts and preserving the patient-physician relationship. Among students and residents, 74% said faculty members teaching primary care gave them a negative opinion of managed care. Ninety-six percent said those teaching specialties gave them a negative impression."

The Washington Post (30 March 1999)

Only in America: "Tom Capano did a number of things that you would probably find offensive, like carrying on a string of affairs while he was married, like telling a million lies about this particular case, like dumping Anne Marie's body in the ocean. But you can't vote guilty just because you don't like him."

One of the pleas made by Tom Capano's four lawyers. Capano was a prominent Delaware attorney on trial for allegedly murdering one of his girlfriends. The jury did vote guilty, and presumably, they didn't like him!
Forbes FYI (Spring 1999)

TIMOTHY B. NORBECK, Executive Director, Connecticut State Medical Society.

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Letters to the Editor

Letters to the Editor are considered for publication (subject to editing and abridgement), provided that they are submitted in duplicate, signed by all authors, typewritten in double spacing, and do not exceed 1-1/2 pages of text (excluding references). They should not duplicate similar material being submitted or published elsewhere. Letters referring to a recent Journal article should be received within six weeks of the article's publication.

Democracy an Idealistic Form of Government?

Letter to the Editor: On March 10, the FCMA sponsored a day at the capitol for its members. The 35 of us who went unanimously agreed that taking the time off from our busy schedules to visit the capitol and the legislative office building was a worthwhile experience.

Actually seeing our senators and representatives on their home turf, and the rooms where they debate the issues that they hope to transform into laws, put a human face on the political process. I particularly was interested in the committee hearing rooms because it is in them that physicians have an opportunity to present oral argument or written testimony on medicine's most pressing issues.

The old house appropriations committee room on the third floor of the capitol served as our headquarters; it must be said that all the legislators seemed genuinely pleased to see us.

The first representative we saw remarked how unusual and gratifying it was to see "so many doctors." He went on to make it clear that legislators are responsive to doctors who take the time to come to the capitol to talk to them. Doctors, he said are held in high esteem by the public and legislators have a high regard for their skills and dedication. He also mentioned that he was aware of how hard doctors work, and that his colleagues do not think that doctors make too much money for what they do. I mention this because the media criticizes us at times for our "high incomes."

He made the point that laws are both made and changed very slowly, emphasizing that that was the best way to protect society's interests. This specific statement made me reflect on why doctors are so unenthusiastic about getting involved in medical politics. After all, as doctors we have been trained to work in small groups. For instance, primary care doctors, specialists, and surgeons often work together to reach a diagnosis and start treatment rapidly. Of course, science facilitates the decision-making process. Much of our professional lives is characterized by this highly individualized activity. Unlike politics, it would be impractical for doctors to waste time considering endless possibilities and then wrangle over compromise.

But the political process is exactly that; and it often takes months and even years for new laws to be enacted. As the legislator said, changing laws is a slow process and it must be if everyone's rights are to be protected.

If we can accept this, then taking time off from the office to visit our legislators in the capitol may be seen as an investment in our profession and not as a loss of time or money. The CSMS and our county medical associations are doing a good job of promoting the ideals of medicine and protecting the rights of patients. But, our professional organizations could be more effective if our legislators saw more doctors at the capitol more frequently. Without this "critical mass," it will be harder to set off the chain reaction that we need to get all of medicine's agenda moving forward.

Our legislators know that taking time off from the office is difficult and costs time and money. But until we show them that we can make that sacrifice, our credibility in promoting our interests will not be as strong as it could be.

It's easy to rationalize that health insurers have so much more money than we do to devote to lobbying and making political contributions that we are only wasting our time trying to change things. But the impression I got from the legislators is that numbers of doctors is more important than numbers of dollars; and that telling them the truth is the most important thing of all.

This may sound idealistic, but isn't democracy an idealistic form of government?

Edward J. Volpintesta, M.D.
Bethel

An Ethical Dilemma

Letter to the Editor: What do you do when the only surgeon who does an operation you desperately need is your son?

I will soon be 77 years old and have a severe lumbar spinal stenosis causing incapacitating left lower leg burning pain on standing more than five minutes or walking more than 30 yards. Dr. Thomas J. Kleeman, Director of the New Hampshire Spine Institute has originated an operation not requiring laminectomy and usually not needing fusion.

Dr. Kleeman has performed over 150 of these operations with dramatic results. He has reviewed the first 54 of these cases. An independent questioner found 100% of these people reported the operation successful.

Three other spine surgeons were consulted in my case. The leading surgeon in the area offered laminectomy and fusion with an 85% success rate. Another orthopedic surgeon several thousand miles away, following Dr. Kleeman's lead, had performed some operations without laminectomy. The distance and the complexity of my case ruled this out. Another back surgeon in the area had never done this operation but was willing to give it a try.

This was not a challenge for the inexperienced. The myelogram showed constriction at three vertebral levels and the spine was significantly affected by scoliosis.

Dr. Kleeman explored the ethics of operating on his father with several sources including the hospital where the surgery was to be performed. An important factor in the decision was his team of anesthesiologists and a physician's assistant who had experience in assisting in this new procedure, as well as the business manager (who handled insurance, hospital arrangements, travel arrangements, etc.).

The operation was performed on the December 23, 1998, without complications. I was out of bed on the day of the operation and out of the hospital and home, after a 2-1/2 hour automobile ride, on the third day. The leg pain is gone along with the "wooden" feeling of both legs that had been present for months.

I know medically it was the right decision, and hope ethically it was as well.

James A. Kleeman, M.D.
Woodbridge

Qualities of Heart and Head

> "A physician may possess the science of Harvey and the art of Sydenham, and yet there may be lacking in him those finer qualities of heart and head which count for so much in life."
>
> Sir William Osler, "Humanities in Medicine"[1]

Dr. Massey, I enjoyed your tribute to Osler, cherished by those of us who did time at the Montreal General Hospital, and Mc Gill, site of the Osler Library. I had a six-month rotation at the Montreal General as a neurosurgical resident at the Montreal Neurological Institute. In the previous century when Osler began his career at the Montreal General, he called it infested with "cocci and rats," a forthright opinion to say the least! The drama of medicine has since passed from that honest age to a new act.

You cited John Singer Sargent, the painter of the famous "Four Doctors."[2] Sargent painted Drs. Welsh, Halstead, Kelly, and Sir William Osler for Johns Hopkins University in 1905. Dr. Welsh "was struck by Sargent's unobtrusive way of studying him.... Sargent talked constantly while he was at work, smoked ... and was always walking to and fro ..." according to Olson, the biographer of the artist.[3] "Osler had a less easy time." Osler, ever the free individual, wished to stand out in his red Oxford robe. "Sargent refused to allow him to wear his Oxford robe: 'No, I can't paint you in that. It won't do. I know all about that red. You know they gave me a degree down there (the year before), and I've got one of those robes ... I've left it on the roof in the rain. I've buried it in the garden. It's no use. The red is as red as ever. The stuff is too good. It won't fade. Now, if you could get a Dublin degree? ... they come down in a beautiful pink.'"[3] The Sargent show at the National Gallery of Art in Washington through 31 May will be followed through the summer at the Museum of Fine Arts in Boston.[4] A synopsis of Sargent's life and work is captured in *Time*.[4]

Then there is the story of Osler the teenager, told by Harvey Cushing in his "Life of Sir William Osler," under the heading: "Fumigating the Matron."[5] The unpleasant Matron of the boys school had, perhaps accidently, poured some slops on one of Osler's friends. Nine boys, "the coast being clear and at Osler's instigation, barricaded 'the old girl' in her sitting room and made a paste of molasses, mustard, and pepper, which they put on the schoolroom stove, so that the fumes rose to her room through the stovepipe hole.... Ultimately she was rescued by the Head Master, and the boys, as can be imagined, duly experienced the effects of the Walpole hickory strips. But this did not satisfy the Matron, who demanded their arrest for assault and battery ... the nine boys passed a few days in the Toronto jail, and were defended by the young Osler's elder brother, Featherston ... the result a reprimand and payment of a dollar and costs."[5] The incident was reported by the *Toronto Globe* in April 1866, under the caption, "School Row at Weston. Pupils Turned Outlaws. They Fumigate the Matron with Sulphur." Sir William Osler related such stories of his youth before the library fire at Oxford.[5]

Prankster, pathologist, physician, philosopher: the joy of living never left him! Osler discovered the role of platelets in blood clotting. He was unsurpassed in bedside teaching, this writer of *The Principles and Practice of Medicine*[6] who kept medical students on their task of meticulous observation. As he weaved the humanities into medicine, he shared his own heroes with us, Dr. Thomas Linacre (1460–1524), Sir Thomas Browne, Sir Thomas More.[2] Veneration of great deeds was important to Osler: "It is the sign of a dry age when the great men of the past are held in light esteem."[1] At the end of the most productive century in medicine do we physicians have heroes anymore? The question itself seems oddly irrelevant.

Have we witnessed the passing of the heroic? Or is it the end of the individual, the free individual from which vital soil the hero takes root? Osler emphasized that we physicians should live each day, day-by-day, doing our daily best. What other profession can claim such a flesh and blood hero? Osler wrote: "In the teacher I have always valued the message of the life above the message of the pen."[1] Osler's life was his message to us. As we forget his life, we also forget our own teachers, those who learned from Osler's life, and the deep humanity they taught. In our current world of managed care, HMOs, capitation, contracts, marketing, and economics, it is their deep human tradition we forget. It was one-on-one then, physician and patient, individual to individual, being to being. Now we are silent witnesses to the dehumanization of medicine, participants in our own peril. Marketing is group-think, by the numbers. Lest we forget, marketing is hype. It won't take long to lose the liberty of our profession, perhaps a generation or two till the die-hards die, and individual liberty is deconstructed into myth, a Camelot that never was. In his vast readings Osler discovered that "in the records of no other profession is there to be found so large a number of men who have combined intellectual pre-eminence with nobility of character."[1] Osler kept the story of the great ones alive, beginning with John Locke (1632–1704), philosopher and physician, who pleaded for "absolute Liberty, just and true Liberty, equal and impartial Liberty," and wrote "All men are naturally in a state of freedom, also of equality."[1] Where is John Locke today?

Dr. Locke planted the seed of the American Revolution and Declaration of Independence. Dr. Osler showed that each of us may shine his independent light by doing our daily best, and cherishing the memory of heroes. As we forget the proud traditions of our noble profession in the modern morass of management and market, let us toast the long passage from Hippocrates to Locke, and from Locke to Osler. To the American Osler Society, in Montreal this year to celebrate the 150th anniversary of our hero's birth, 12 July 1849! Keep his memory aloft, to remind us of what we were! Let us worship heroes once more! To William Osler, human and humanist, heart and head!

Charles W. Needham, M.D., F.A.C.S.
Norwalk

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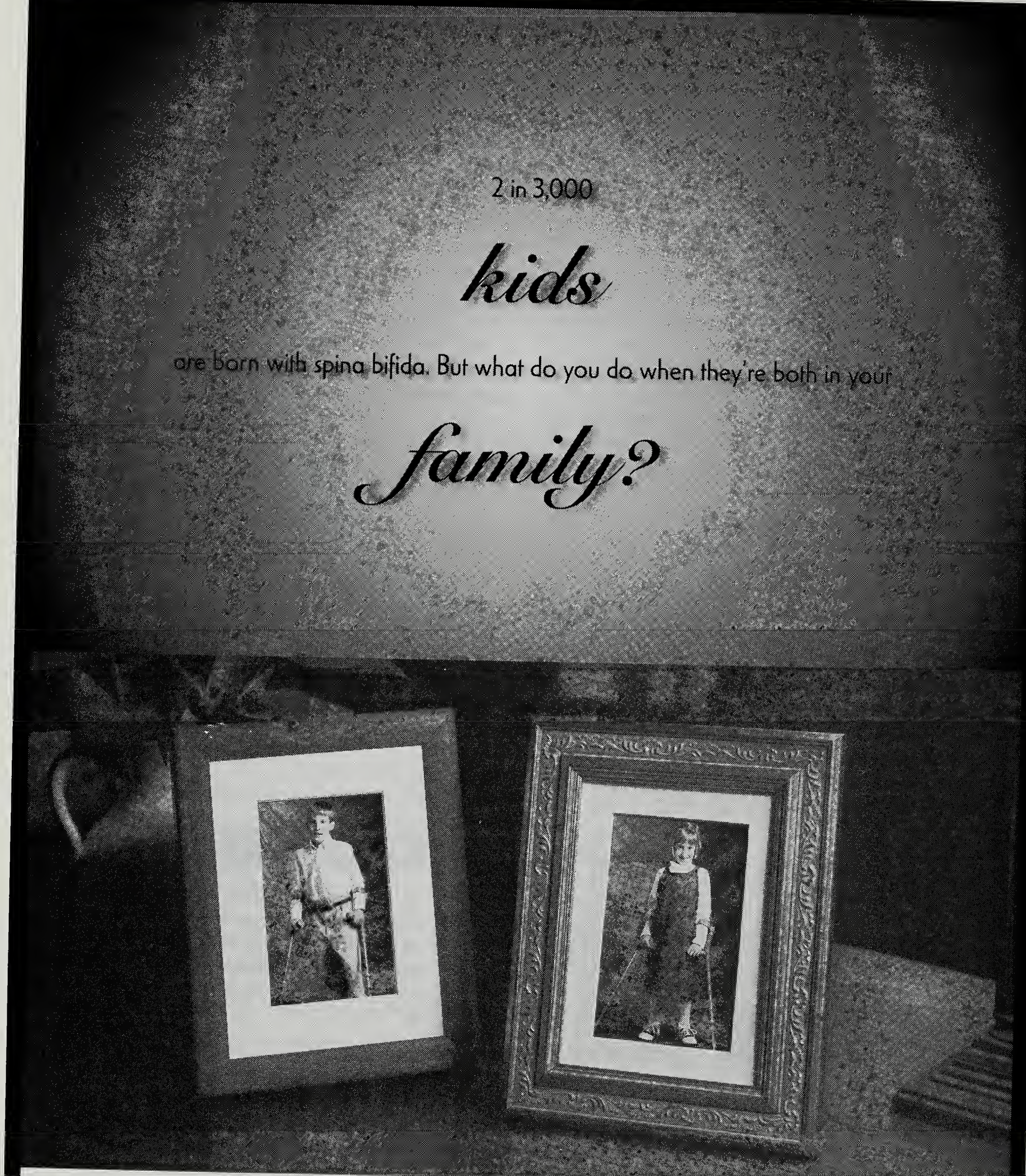
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BOOK REVIEW

A Time to Die: The Place for Physician Assistance
by Charles F. McKhann, M.D., xi 280 pp, index
New Haven and London, Yale University Press, 1999
$30.00. ISBN 0-300-07631-2

The news from Oregon about that state's experience with legalized physician-assisted dying is reassuring. A study of the 15 cases reported during the year following passage of the Oregon Death with Dignity Act[1] reveals that the central concern driving selection of assisted dying is not unrelieved pain or depression nor is it concern about draining family finances; it is, rather, the wish to exert autonomy, the desire to assert control over the moment and circumstances of one's own death. The assertion of autonomy through rational suicide is a central issue in assisted dying and a fundamental building block in the lucid, thorough, and erudite argument Charles F. McKhann makes for assisted dying in *A Time to Die: The Place for Physician Assistance.*

Dr. McKhann, Professor of Surgery at the Yale University School of Medicine, approaches the subject of assisted dying (he prefers this terminology to assisted suicide) in a manner both scholarly and personal. He begins with his own father's unnecessarily prolonged death at the age of 89, the event which planted the seed that ultimately grew into this book. He includes excerpts from interviews with dying patients and with the physicians who care for them.

In one interview, reported at length, McKhann details the physician assisted death of a Dutch woman with terminal cancer. In this instance the physician actually administered lethal medications by injection. The patient discussed and planned the event extensively with her family over many months. The patient's family was lovingly present to the end and she died a peaceful death, gratified to be able to exert a measure of control in the face of her suffering. McKhann compares this death with an American vignette, a failed attempt at suicide by gunshot of a 60-year-old man with terminal lung cancer. The contrast in the management of suffering, for both the patient and family, is stark.

In choosing to contrast these two cases, McKhann draws our attention to a central public policy concern that is the focus of much of the debate about physician-assisted suicide (PAS) in the United States. This debate is about the potential risk that legalizing PAS, in which the physician writes a prescription for a lethal dose of medication for a patient but does not administer it, will lead predictably and inevitably down a "slippery slope" to voluntary euthanasia, in which the physician actually administers the medication to a competent, consenting, terminally ill patient. From voluntary euthanasia it is, arguably, only a matter of sliding a bit further to involuntary euthanasia. Along the slide down the "slippery slope" it is feared that PAS will be extended from competent terminally ill patients to those who may not be competent and do not suffer from terminal illness and that a rash of social and economic concerns such as the financial burden a patient may create for her family, undue family influence, and concern about the utilization of rationed medical resources may intrude into end-of-life decision making. At the bottom of this "slippery slope" lies the involuntary euthanasia of disadvantaged and unprotected populations: the elderly demented, brain injured, chronically mentally ill, the poor.

Dr. McKhann's approach to the "slippery slope" is thought provoking. He argues that the distinction between PAS and voluntary active euthanasia is a false one and that there is, indeed, no inherent moral distinction between writing a prescription for a lethal dose of medication and administering it directly by injection. In fact, he argues that "this transition is so predictable and reasonable that it should not in any way be considered a step along the slippery slope. ..." Eventually, he believes, the courts will be required to broaden the concept of physician assisted dying to include the administration of medication as a matter of equality for patients who are too disabled to be able to take medications themselves.

While endorsing voluntary euthanasia, McKhann closes the door firmly on the possibility that this practice would lead to involuntary euthanasia. He rejects the inevitability of a slide into "moral oblivion," highlighting the many differences between our society and that of Nazi Germany where involuntary euthanasia was widely practiced. He presents a lengthy critique of worrisome trends in American health-care financing which some see as "ice on the slope." Ultimately, only actual experience will test these arguments and Oregon will be watched closely as the only laboratory for legal PAS in the United States.

Sigmund Freud wrote that "it is indeed impossible to imagine our own death—in the unconscious everyone is convinced of his own immortality."[2] Freud contributed to the belief, long pervasive in psychiatry and medicine as a whole, that suicide is irrational. It is frequently so but it is a premise of the physician-assisted dying movement that under some circumstances suicide may be a rational choice made by a competent patient. Likewise, if it is moral to withhold and withdraw treatment from terminally ill patients and even to medicate them for pain with doses of medication which we know may cause death, than it is reasonable to at least consider that it is moral and humane to assist the patient who has made a choice to control the moment of her death. Many will disagree. But whether you believe in physician-assisted dying or abhor it, or like many, find yourself uncertain, you will find this book to be a compelling and thorough examination of the subject by a doctor who brings the best of physicianly inquiry and compassion to his subject.

Harold I. Schwartz, M.D.
Hartford

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W. T. Liberson Collected Writings, Volume I, 1941–1959, compiled by Cathryn Liberson,

xii 377 pp., New Jersey, Smyrna Press 1998.
ISBN 0-918226-35-1

Dr. Wladimir Theodore Liberson had a long productive life in EEG and clinical and experimental neurophysiology. He died in 1994. This volume, the first of four to be published, covers his collected writings from 1941–1959. This time period was mostly spent in Connecticut where from 1941–1948 he directed the Physiological Research Laboratory at the then Hartford Retreat (Institute of Living) and from 1948–1953 when he was director of clinical neurophysiology at Hartford Hospital and at the State Veterans Home and Hospital in Rocky Hill. This "Connecticut period" of his writing, when I first met him, is appropriately reviewed here.

Early papers helping to define normative data in the earliest days of EEG were performed on a three-channel electroencephalograph! By 1945 six channels were in use. Hans Berger, the father of electroencephalography, was a psychiatrist, and had high hopes that this area of study would clarify his field. Dr. Liberson attempted correlations with psychological measures (word association processes) and with clinical psychiatry. There are several articles documenting EEG effects of new psychoactive drugs, notably chlorpromazine.

Many articles review sleep long before the current interest began. In his descriptions of EEG and sleep he was one of the first to use the term "microsleep," 30 years before Guilleminault in 1974, although in a slightly different context. Articles on sleep reflect his broad knowledge of physiology in this area and his intimate knowledge of Russian experimental neurophysiology, including conditioning.

His work in psychiatry also led him to study electroconvulsive therapy, both in clinical and experimental settings. He attempted to make this treatment as atraumatic as possible. Later when psychosurgery was introduced, he worked with W. B. Scoville and R. H. Dunsmore and others in a series of interesting physiologic studies which have outlasted the need for this now seldom-used treatment. Yearly summaries of the latest contributions to brain physiology published in the *American Journal of Psychiatry* are included. Reading them is a trip down memory lane.

He wrote about brain tumors, neuropsychology, epilepsy, and much more. Studies of isometric exercises were among his early contributions to the field of physical medicine and rehabilitation for which he later received much recognition.

Dr. Liberson reviews the early paper of Stephenson and Gibbs on Referential EEG. Dr. Charles Stephenson started the EEG Laboratory at Hartford Hospital in 1940, and preceded Dr. Liberson in this area.

The style of his writings varies with their purpose. Some are formal papers, some are summaries designed to help readers "keep up," with comments. Some articles are clearly designed to teach. In these one can detect a broad philosophy, enthusiasm, and generosity. While some of the early work is now part of history, there are many ideas that remain fresh. Thanks to this volume they are also readily available.

Jolyon S. Tucker, M.D.
Hartford Hospital

Managing Patient Expectations: The Art of Finding and Keeping Loyal Patients,

Susan Keane Baker, 281 pp., Jossey-Bass,
San Francisco, 1998, $34.95.
ISBN 0787941581

Ms Baker has attempted to identify patient expectations and experiences that will provide a positive interaction between physicians and their patients. This book includes detailed recommendations for physician practice organization, office staff interaction and physician patient relationships. Physicians and other clinicians are the primary audience, but the topic is of interest to health-care administrators, case managers, and risk managers.

Patient expectations are the focus of the book, which is divided into five parts: how such expectations are created, how to identify them, how to manage them, how to handle those that are unmet or go awry, and how to exceed expectations and build loyalty. All dimensions are examined in detail with emphasis on patient perceptions. The author recognizes the need for excellent clinical and technical skills but makes the case that patients are not in a positive to evaluate these aspects of a physician's practice hence it is critical to focus on what the patient is knowledgeable to judge.

Susan Keane Baker, the author, works for Metropolitan Life's PPO, where she is responsible for quality improvement and patient satisfaction. She has held vice president and senior vice president positions at hospitals in Connecticut and New York. She speaks and writes about patient satisfaction and risk management issues and is frequently asked to speak before audiences from hospitals, insurance companies, group practices, professional societies and managed care organizations.

It is the author's belief that word of mouth plays a significant role in determining a patient's decision about which physician to seek for care. She strongly encourages physicians to identify and implement some or all of the strategies she feels are critical to successful clinical practice. Most of the strategies are common sense; however, not all are evident in the practices of most physicians. The book falls somewhat short in recognizing the overwhelming demand that currently exist in most practices today that include not only patient expectations but significant third party payor expectations. Unfortunately many practices face innumerable barriers to functioning optimally as a result of the unpredictable nature of patient illness and demands. Nonetheless, this little book provides numerous techniques and approaches to be considered when designing, or redesigning, patient care practices. One note of caution: local customs and practices may directly conflict with some of Ms. Bakers' advice, such as her suggesting that "VIP" or "preferential treatment" be provided inconspicuously.

Joseph J. Klimek, M.D.
Claire Tiernan, R.N.
Hartford Hospital

Managing Patient Expectations:
The Art of Finding and Keeping Loyal Patients,
Susan Keane Baker, 281 pp., Jossey-Bass,
San Francisco, 1998, $34.95.
ISBN 0787941581

As I read this book, I asked myself these questions:

- Why don't physicians spend as much time managing the "art" of medicine as they do managing the "business" of medicine?
- Why don't physicians take a systematic, organized, and purposeful approach towards finding new patients and keeping old ones loyal?
- Why don't physicians think more about what attracts patients and satisfies them?

Here are a few answers I've come up with. Among physicians:

- the "art" of medicine is considered an inborn psychological trait; in other words, either you have a pleasing personality and a touch with patients or you don't;
- learning the "soft stuff" is not considered a dignified or professionally rewarding activity; in other words, it's more professionally-correct to be "high tech" than "high touch;"
- The "art" of medicine is something random you learn as you go along; not something you systematically concentrate on, like reading professional journals, gaining CME credits, or learning the latest procedure.

I confess I've shared these physician biases, but as I read *Managing Patient Expectations,* I began to readjust my attitude and my altitude. My conversion began with the opening paragraph in the preface:

> Satisfied patients are the key to professional success and the personal rewards of medicine. Every physician prefers loyal patients who are satisfied with the care they receive. When a patient is not satisfied, he may seek care elsewhere or may even seek retribution by filing a malpractice claim. The need to satisfy the patients is also fueled by the financial and other rewards given by managed care companies and health systems to those physicians and medical groups that score well on patient satisfaction surveys. Those incentives and the publication, by practice, of regional and national patient satisfaction survey results provide data that are difficult to dismiss or dispute.

My conversion continued as I read Susan Keane Baker's pithy and objective examples and check lists on these patient satisfying how-to techniques:

- Increasing "word of mouth" referrals by making yourself memorable.
- Posting a promise list of how you handle HMO financial conflicts.
- Achieving a favorable impression in the first 60 seconds of the patient encounter.
- Administering a "First Impressions Test" to your patients.
- Making your reception area inviting and comfortable.
- Listing the keys to an effective telephone call.
- Practicing the fundamentals of effective listening.
- Identifying 15 "Moments of Truth" which often determine if a patient is going to stay with your practice or choose another doctor (clue: it's often not the doctor, but the "context " of the practice that turns patients off).

As I neared the end of the book, and later when I interviewed Ms. Baker, an airline pilot metaphor came to mind. Airline pilots are experienced professionals responsible for the welfare of thousands of passengers each year. To make sure things go right; pilots go through a checklist before they take off. This book is a checklist for physicians, their crews, and their patients.

For practicing Connecticut physicians, this book has an additional benefit. Ms. Baker has worked as a hospital administrator in Connecticut for many years. She knows this market. She can be reached in Danbury, Connecticut at 203-966-4880.

Richard L. Reece, M.D.
Old Saybrook

Global Fees for Episodes of Care:
New Approaches to Healthcare Financing,
Douglas Emery, Editor, 440 pp.,
McGraw-Hill, New York, 1999, $42.00.
ISBN 0070220573

This book, written and edited by Douglas Emery, a health-care consultant who is President of Zoadigm Health Systems, Inc., in Salt Lake City, has a simple message: get ready for being reimbursed through global fees for episodes of care. He's been working on the theory of global fees for episodes of care for seven years, both in the trenches and in the ivory tower, and knows of what he speaks.

Because of successful demonstration projects by HCFA, Oxford Health Plans, Anthem Health plans, and North Shore Hematology/Oncology Associates, it's increasingly likely HCFA will implement Global Fees for Episodes of Care (EOC). Indeed, according to Mark Wynn, Ph.D., senior analyst at HCFA, HCFA may introduce Global Fees for *all or almost al*l Medicare DRGs within the next three years. Payment will be administered through Physician Hospital Organizations (PHOs), for *both* inpatient and outpatient care. Discounts by physicians and hospitals will be in the 3% to 5% range, with discounts being phased in over three years.

What's an *Episode of Care*, and what's a *Global Fee*? An Episode of Care is a definable disease event or procedure, eg, colon resection for colon cancer. In Medicare's eyes, an Episode of Care (EOC) equals a Diagnosis-Related Group (DRG). The hallmark of episode definition is the ability to link up all the health-care resources into a defined event. Global Fee components include diagnostic studies, therapeutic services, consultations, outpatient visits, inpatient visits, hospital costs, and physician fees. Wrap all these costs in one package, discount hospital costs and physicians' fees by 3% to 5%, and, Voila!, you have a Global Fee (see table).

This form of payment will grow fast because HCFA will mandate global fees for 95% of hospital Diagnostic Related Groups (DRGs) by 2002. Right now, the only thing holding back federally-mandated Global Fees for most Medicare DRGs is HCFA's Y2K bug obsession. Once the Y2K bug dies, a HCFA spokesman, Mark Wynn, says the government will move quickly: "The research and demonstration division of HCFA is currently expanding projects with global payment systems including an exclusive DRG project for all hospital and physician payments. This is a dramatic move towards EDC (Episode of Disease Care) from the largest healthcare payer in the United States. "

Why will Global Fees for Episodes of Care dominate physician reimbursement? Putting together global fees for episodes of care are a doable and inexpensive exercise. In the early 1990s, I was president of an Oklahoma PHO. We developed Global Fees for over 50 procedures done in the hospital, at a minimal cost of $250/physician/year matched by the hospital, for everything from vaginal deliveries to coronary artery bypass procedures. They're not only doable but they put physicians in charge of medical care; patients receive only one bill and express high satisfaction; costs become controllable; physicians and hospitals increase their net income; and physicians and hospitals align themselves into one economic entity without creating an expensive and dysfunctional Integrated Delivery System (IDS). Besides, as Medicare payment goes, so goes the other payers.

I have two criticisms of this book: 1) it is written in language of a health-care economist and reading it will be heavy going for most practicing doctors; and 2) it lacks an index.

Richard L. Reece, M.D.
Old Saybrook

Here's Global Fees for DRG 104 (coronary artery bypass with cardiac catherization).

Specialties	Medicare Fees, discounted in 3%-5% range	HMO Fees, discounted in 3%-5% range
Hospital	$30,639	$18,328
Heart surgeon	$3581.14	$5,371.71
Anesthesiology	$764.72	$1,147.08
Cardiology	$1,240.38	$1,860.57
Radiology	$177.94	$266.91
Total Global Fee for DRG 104	$36,406.18	$26,974.27

Source: Chapter 14, See Reference 1.

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The Society maintains the Physician Placement Service as a *free* service to the medical profession, hospitals, and communities in Connecticut.

***Opportunities* should be typed, double-spaced copy on letterhead and submitted to CSMS, Physician Placement Service, 160 St. Ronan Street, New Haven, CT 06511 (203) 865-0587 or fax to (203) 865-4997. These will be published as space permits and will be distributed to physicians inquiring about such *opportunities*.**

***Physicians wishing to locate* in Connecticut may call the office requesting opportunities in their specialty. Also, candidates are invited to submit a resume to be kept on file with the Society. An announcement of a physician's availability will be published in two issues of *Connecticut Medicine* as space permits.**

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Available June 1999. Licensed in Connecticut and Maryland. Passed National Boards. American Board certified. M.D. at Lokmanya Tilak Medical College, Bombay, India. Internship and residency at Greater Baltimore Medical Center. Seeking a long term position in outpatient or inpatient work, or a combination of both. Please respond to: Munish Shastri, M.D., 240-C Rodgers Forge Rd., Baltimore, MD 21212; telephone (410) 377-4490.

NEUROLOGY

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The Fifth Annual Connecticut Update on Head and Neck Pain

Cosponsored by the
Headache Cooperative of New England, Inc.
and
The University of Massachusetts Medical School

Radisson Hotel, Cromwell, Connecticut

Saturday, 2 October 1999

Contact person: Dr. Sheldon Gross
(860) 232-4344; Fax (860) 242-7725

Second Yale Conference on Women's Health and Fitness

Omni Hotel at Yale, New Haven, Connecticut

21–23 October 1999

Sponsored by
Yale-New Haven Hospital and Yale University

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Papers prepared on a word processor should be submitted on a diskette along with the hard copy.

Please send them to:

H. David Crombie, M.D., Editor
Connecticut Medicine
160 St. Ronan Street
New Haven, CT 06511

Consumer Concern or Complaint Form
Regarding Group or Individual Health Insurance
Including Managed Care Plans

To Be Submitted To
THE CONNECTICUT DEPARTMENT OF INSURANCE
CONSUMER AFFAIRS DIVISION
P.O. BOX 816
HARTFORD, CT 06142-0816

Phone: (860) 297-3900 or 1-800-203-3447 Fax: (860) 297-3872

The Consumer Affairs Division of the Department of Insurance receives, reviews, and responds to complaints and inquiries from state residents concerning insurance related problems. The staff examines each complaint to determine whether statutory requirements and contractual obligations within the commissioner's jurisdiction have been fulfilled. The Consumer Affairs Division coordinates the resources available within the Department to address consumer complaints.

In order for the Division to pursue a formal review of a concern or complaint, the consumer must submit a written explanation to the address listed above with as much pertinent detail as possible. Each written submission to the Consumer Affairs Division will be acknowledged.

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Address: ____

Phone where the Department can contact you: (_____) ____________________________

This concern or complaint concerns the following Insurance Company or Managed Care Plan: ______________________________________

Policy Number: ____

Name of Policyholder: ____

Name of Enrollee: ____

Name of Patient: ____

Patient is ___ self ___ dependent ___other **(explain)**______________________________

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Manuscripts should be submitted to: **David Crombie, M.D., Editor, *Connecticut Medicine,*** 160 St. Ronan St., New Haven, CT 06511 The manuscripts submitted should include, **an original, one duplicate copy, and a $3^1/_2$" ($5^1/_4$") diskette** (all popular computer wordprocessing languages are acceptable—if unsure call the *Journal* office). The author should retain another copy for his records. A covering letter should identify the person (with the address and telephone number) responsible for negotiations concerning the manuscript; the letter should make it clear that the final manuscript has been seen and approved by the authors.

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Titles and Author's Names

The first page of the manuscript should include (1) title of paper; (titles should be short, specific, clear, and amenable to indexing; (2) name of author(s), including first name(s) and academic degree(s); (3) List hospital positions for each author and any institutional or other credits. If an author's present affiliation is different from the affiliation under which the work was done, both should be given. Include academic appointments when applicable.

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Measurements may be expressed in Système International (SI) units, but include older conventional units in parentheses if desired. Use Celsius for temperature.

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The second page should contain an abstract of not more than 150 words. This abstract should be factual, not descriptive, and should present the reason for the study, the main findings (give specific data if possible), and the principal conclusion. Do not include a summary.

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The following minimum data should be typed double-spaced: names of all authors, complete title of the article cited, name of journal abbreviated according to *Index Medicus,* year of publication, volume number, and first and last page numbers. All references must be cited in the text. They should be arranged according to the order of citation, and not alphabetically. All references must be numbered consecutively. Numbered references to personal communications, unpublished data, and "in preparation" are unacceptable. If absolutely essential, such material may be incorporated in the appropriate place in the text or as a footnote. Sample references are as follows:

1. Jones J: Necrotizing *Candida* esophagitis. *JAMA* 1980; 244:2190-1.
2. Kremer H, Kellner E, Schierl W, et al: Ultrasonic diagnosis in infiltrative gastrointestinal diseases. *Dtsch Med Wochenschr* 1978; 103:965-6. Abstracted, *JAMA* 1978; 240:2784.
3. Influenza vaccine—recommendations of the Public Health Service Advisory Committee on Immunization Practices. *MMWR* 1979; 28:231-8.
4. Fischer DH: *Growing Old in America.* New York, Oxford University Press, 1977, pp 210-6.

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Figures should be professionally drawn and photographed, if possible. Glossy, clear black and white photographs should be submitted.

Line drawings, graphs, and charts should be done in India ink on high-grade white drawing paper. Lines should be examined for evenness, breaks, and proper alignment. Lettering and symbols should be clear and of even density throughout. Computerized drawings, graphs, and charts should be printed by a 300 dpi printer if available (submit on a diskette for publication). Symbols, lettering, and numbering should be of such proportioned size that when the figure is reduced to *Journal* column width (8 cm) each item will be distinctly recognizable.

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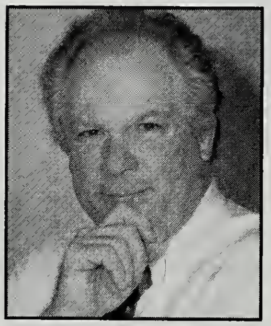

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Vibrotactile Stimulation for Treatment of Neonatal Apnea: A Preliminary Study

JOHN R. LOVELL, M.S., LEONARD EISENFELD, M.D., ERIC ROSOW M.S., JOSEPH ADAM, M.S., CRAIG LAPIN, M.D., AND JOSEPH D. BRONZINO, PH.D.

Introduction

CURRENTLY, treatment of apneic episodes is achieved with ventilatory assistance, pharmacological treatments, and/or physical stimuli. Physical stimulation, administered to terminate apneic events, usually is accomplished by medical personnel through hand contact. This hand contact is often delayed and may present infection risks due to inadequate handwashing between handling of different infants.

Mechanical attempts to reduce the number of apneic spells include: an oscillating air mattress which operates similar to the oscillating waterbed[1–3] and vertical pulsating stimulation (the inflation and deflation of a blood pressure cuff placed under the infant).[4] Overall, these systems seem to reduce the number of apneic spells. However, apnea is not eliminated and no treatment is provided by these systems once apnea has occurred.

The objectives of our study were:

1. To assess the safety and efficacy of vibrotactile stimulation (VTS) in interrupting apneic events.
2. To compare effectiveness of traditional hand stimulation to vibratory device stimulation.

Methods

A software system (Virtual Instrument) was developed with LabVIEW® (National Instruments, Austin, Texas) to record apnea and to assess response to vibrotactile and traditional hand stimulation.[5] The software system allows scoring of stimulation responses by measuring apnea and stimulus duration, heart rate, and SaO_2. Time to resumption of breathing was calculated by the software system.

Apnea was defined as absence of respiration for greater than 20 seconds, or absence of respiration for less than 20 seconds, with bradycardia and/or oxygen desaturation which was thought clinically significant by the attendant nurse. The apnea duration was measured.

Each infant was assigned independently and randomly to either the VTS or hand stimulation. Each study period was eight hours. Infants assigned to the VTS group who did not receive device stimulation because of the absence of apnea were discontinued from the study. If assigned to the control period first, after eight hours the infants were studied with the VTS. In both control and experimental groups the definition and determination of apnea was by the nurse. The nurse decided to stimulate or not; the decision was made by clinical observation and monitoring of heart rate, respiration, and oxygen saturation.

Typically, the nurse provided hand stimulation in the form of gentle to vigorous stroking or shaking of the trunk and/or extremities. A foot switch was activated during hand stimulation to indicate initiation of hand stimulation; release of the foot switch indicated termination of hand stimulation.

Device stimulation was provided, once per apneic episode for approximately three seconds, by an Audiological Engineering (Somerville, Mass.) Vibrotactile Stimulator,

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model 1220, with a frequency of 250 Hz and an impedance of 22 Ohms. The stimulator was powered by a 10 V p-p, 250 Hz square wave. This 2.0 x 1.7 x 1.0 cm hard plastic stimulator was placed on the sole of the infant's foot and secured with a Velcro band.

Successful stimulation (VTS or hand), was recorded if no further treatment was required to end the apneic spell. In all cases, when further treatment was required, it was hand stimulation. All infants' parents signed informed consent approved by the Connecticut Children's Medical Center institutional review board.

Results

Seven infants with apnea were enrolled in the study, five of whom were studied. Only one had apnea during testing. This infant was a baby boy with a birth weight of 1,280 grams and a gestational age of 28 weeks. He was studied on four occasions at 7, 9, 13, and 18 days postnatal age. The infant was on Continuous Positive Airway Pressure (CPAP) for the first two studies and trialing off CPAP for the last two studies. During all of the studies, the infant received aminophylline.

Safety of the VTS.—The physical condition of the foot was examined for appearance and mobility every two to four hours during each study. The foot was normal for all studies. Superficially there were no skin, soft tissue, bony, or neural problems. Range of motion remained normal. On two occasions, a light imprint of the stimulator shape was noted. For that reason the stimulator was moved to the contralateral foot. Foot imprints were a result of the fixation method.

Efficacy of the VTS.—VTS and traditional hand stimulation were equally effective in terminating apnea (9/12 (75%) *vs* 10/12 (80%) *P* >0.05) (Table 1). Each of the four studies were tabulated with the number of stimulations and their success for both the experimental and control groups noted.

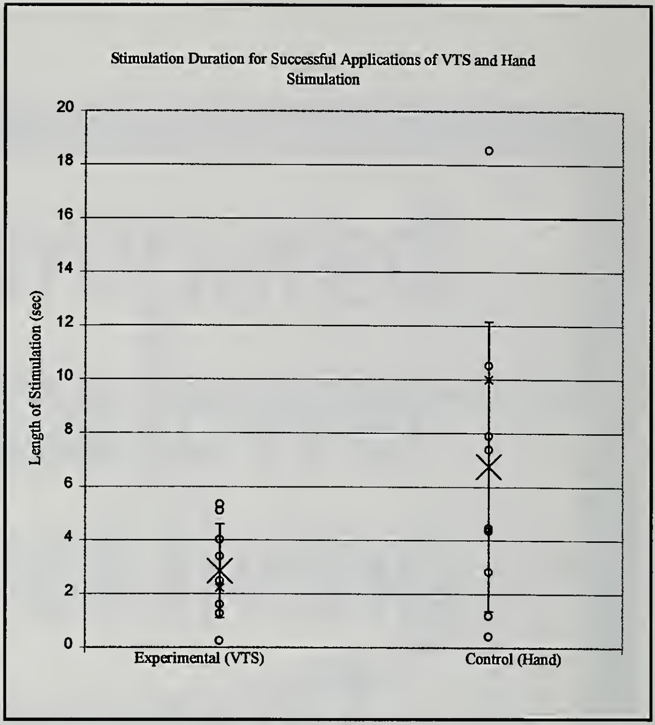

Figure 1.—Stimulation duration by VTS and hand for successful applications(VTS, mean = 2.9±1.7 seconds; hand, mean = 6.8±5.4 seconds, *P* = 0.05).

When successful, it took the same time to terminate apnea whether by hand or by VTS (VTS 3.1 ± 2.6 seconds, hand 3.7 ± 4.1 seconds, *P* = 0.67). The range of apnea duration for all stimulations, for both VTS and hand stimulation, was 5.5 seconds to 47.1 seconds. The apnea of 5.5 seconds was a period of prolonged periodic respiration associated with bradycardia and desaturation. The 47 second apnea was associated with both bradycardia (to 41 beats/min) and oxygen desaturation to 68%. The mean apnea duration for all spells was 29.6 ± 8.6 seconds. The mean duration of all apneas, for both VTS and hand stimulation, was similar (VTS = 30.6 ± 11.4 seconds, hand = 28.5 ± 4.7 seconds, *P* = 0.55).

Table 1.—Apneic spells receiving stimulation and comparison of effectiveness of experimental (VTS) *vs* control (traditional hand stimulation).

Study	Postnatal Age (days)	Number of Apneas Receiving Stimulation [Experimental (VTS)]	Successful Stimulation [Experimental]	Number of Apneas Receiving Stimulation [Control (Hand)]	Successful Stimulation [Control]
1	7	6	4	5	5
2	9	2	1	4	2
3	13	2	2	1	1
4	18	2	2	2	2
Total		**12**	**9 (75%)**	**12**	**10 (80%)**

Successful stimulation for both VTS and hand stimulation had apnea durations which ranged from 5.5 seconds to 47.1 seconds with a mean duration of 28.3 ± 8.9 seconds. Total mean apnea durations for successful VTS and hand stimulation were also similar (VTS = 28.1 ± 12.1, hand = 28.5 ± 5.2 sec., $P = 0.94$).

The time of stimulation was recorded by measuring the duration of time from the beginning of the apneic spell to the initiation of stimulation. This time ranged from 2.4 seconds to 32.4 seconds with a mean of 24.0 ± 8.1 seconds. Time of stimulation into apnea for all applications of VTS and hand stimulation were similar (VTS = 23.9 ± 10.9 seconds, hand = 24.1 ± 4.4 seconds, $P = 0.96$). Mean time of stimulation into apnea for successful applications of stimulation was also similar. (VTS = 25.1 ± 12.3 seconds, hand = 24.7 ± 4.5 seconds, $P = 0.93$)

There was a difference in the duration of stimulation itself. For successful stimulation, the duration of VTS stimulation was half that of hand stimulation (VTS = 2.9 ± 1.7 seconds, hand = 6.8 ± 5.4 seconds, $P = 0.05$) (Fig. 1).

Discussion

In this preliminary study, VTS was as safe and effective as hand stimulation. The duration of stimulation for the VTS was limited by design and was briefer when compared to the usual nursing routine, hand stimulation. To our knowledge duration of routine hand stimulation for treatment of apnea has not been previously described. Either VTS may be more efficient than hand stimulation or lengthy hand stimulation is unnecessary. Other types of mechanical stimuli to terminate apnea have been tried with varying success. Frank et al,[6] using a rapidly inflated and deflated balloon under the neonates neck, reported success in 99/105 (94%) apneic episodes. Cutaneous stimulation and electrical stimulation have had varying success experimentally in fetal lambs in utero.[7]

Apnea termination in this study occurred a mean of 24 seconds after initiation of the event. However, apnea spells ranged up to 47 seconds. This is late and further prompts efforts to automate with a competent feedback system to detect and initiate earlier stimulation of an apneic event. Such a system has been described.[8]

This study is limited since only a single patient was analyzed. However, this single patient served as his own control with the variable being the mode of stimulation. Questions of safety (ie, trauma to soft, bony, and neural tissues) and efficacy remain. In addition, improvements in the design of vibrator technology and vibrator body placement are required. The results of this preliminary study support further development of vibrotactile stimulator technology driven either manually and/or automatically.

Acnowledgements

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Chondrolipoma of the Breast: A Case Report and Review of the Literature

JENNIFER GREER, M.D., MASSOUD MARJANI, M.D., AND DAVID LOWELL, M.D.

ABSTRACT—Chondrolipoma of the breast is a rare benign cartilage-containing mesenchymal tumor. In the case presented, a patient with a breast mass detected by physical examination was found to have a discrete nodule containing fibrolipomatous tissue with focal areas of cartilage. A review of the literature and differential diagnosis of benign mesenchymal tumors of the breast are discussed.

Introduction

THE occurrence of benign mesenchymal chondrolipomatous tumors is rare. Only five prior reports of chondrolipoma of the breast have appeared in the English-language literature. The most recent report was in 1989. In this case report, a patient with chondrolipoma of the breast is described and the literature is is reviewed.

Case Report

A 54-year-old white female presented to her primary physician with a palpable left breast mass. A mammogram was performed and revealed a 2 cm density in the left breast. No abnormal calcifications were present. An ultrasound showed a solid lesion in the left breast of 2.7 cm diameter. Routine labs were found to be within normal limits. She was referred to a surgeon for excision.

Pathologic findings included a gross specimen of 6 cm in maximum dimension. Within it was a single discrete nodule of rubbery soft gray tissue measuring 2.3 cm in diameter. Microscopically, the nodule was composed of bundles of loose fibrous tissue with focal islands of mature cartilage. No malignant features were identified.

The postoperative course was uncomplicated. The patient was followed by her surgeon with no recurrence of the mass or development of breast malignancy.

Discussion

Benign tumors of the female breast associated with chondromatosis are uncommon. Kaplan and Walts (1977) reported the second such case in the English-language literature in 68 years.[1] Subsequently, four cases were reported between 1981–1988.[2] The patients were aged 39 to 66. Four of the six patients had preoperative mammograms showing well-circumscribed masses without evidence of calcification. The pathologic findings were similar. All had discrete mesenchymal lesions with microscopic evidence of cartilage as a prominent component.

These lesions are rare and the histogenesis of cartilage in chondrolipoma is unclear. As discussed by Dharkar and Kraft (1981), metaplasia or direct transformation of tumor epithelium has been considered,[3] as has multicentric evolution of cartilage.[4] Excisional biopsy is required for diagnosis and no further treatment is necessary. Chondrolipomas of the female breast have been confused with fibroadenomas on physical examination. Fibroadenomas are the most common benign breast lesions containing mesenchymal and epithelial elements. They usually lack cartilagenous tissue.

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Table1.—Features of chondrolipomatous breast lesions

Source	Patient number	Age	Symptom	Size,cm
Sick,1907[5]	1	72	mass	6
Kaplan,Walts, 1977	2	66	mass	2
Dharkar, Kraft, 1981	3	39	mass	2
Lugo et al[6], 1982	4	65	mass	2
Lugo et al	5	53	mass	2
Marsh et al, 1998	6	58	none	2
Present case	7	54	mass	2.3

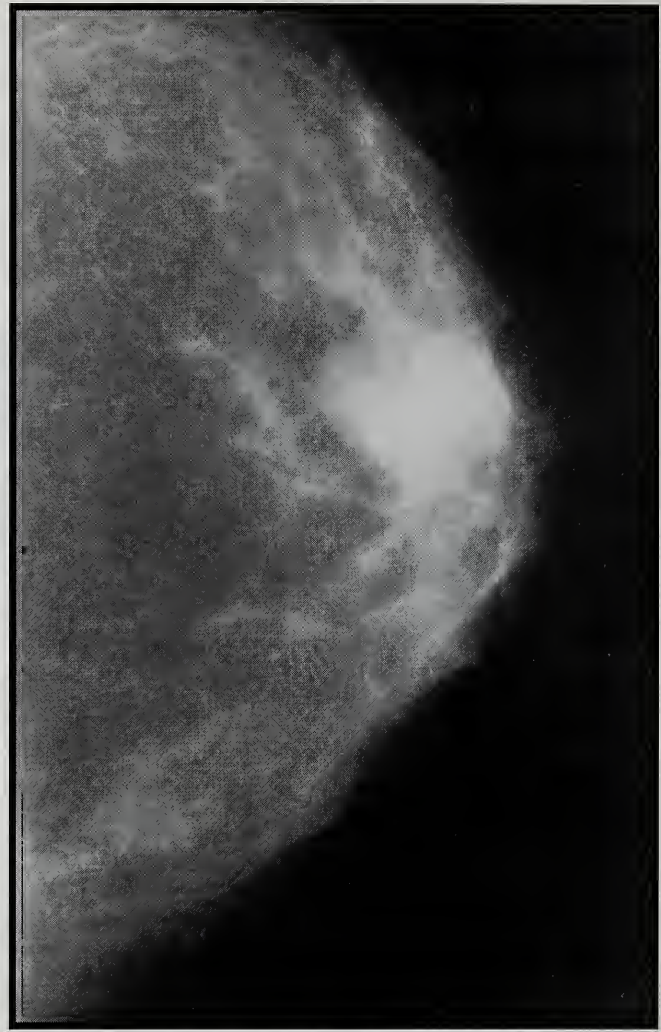

Figure 1.—Mammogram left breast, Solid mass noted.

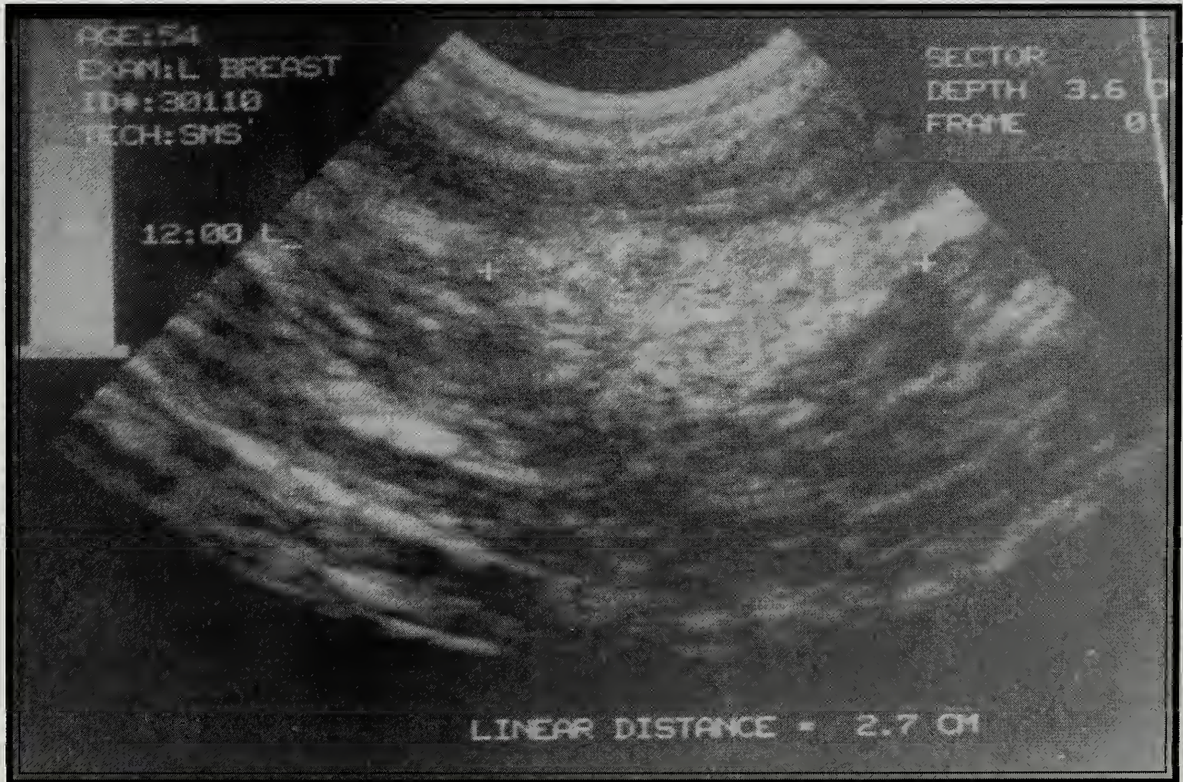

Figure 2.—Ultrasound left breast, 2.7 cm solid mass noted.

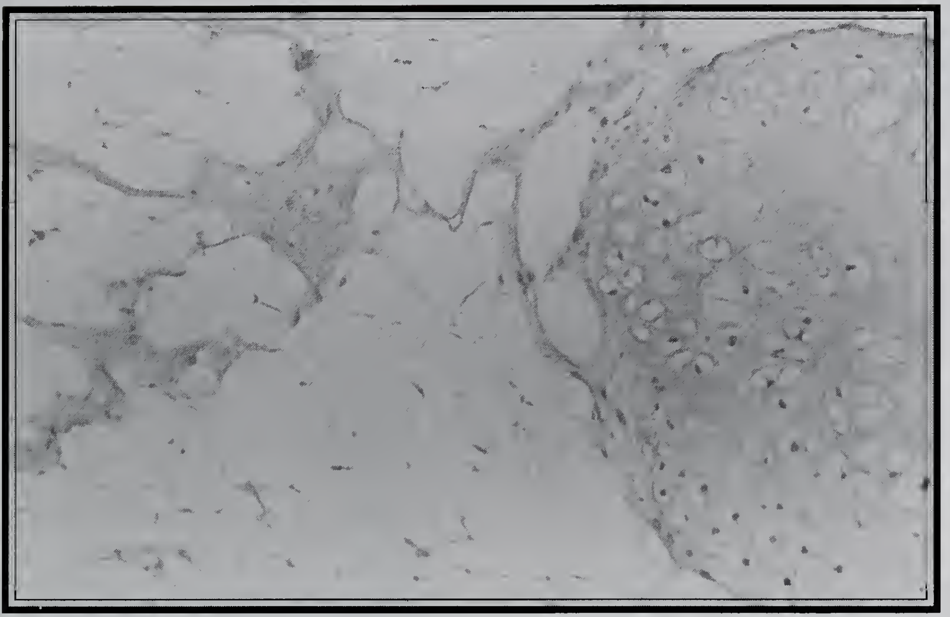

Figure 3.—Original magnification 100x photomicrograph of tumor showing cartilaginous component and adipose tissue.

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National Records Group Supports Medical Information Protection Act

AHIMA backs preemption of state laws, treating all information the same, patient access to records

WASHINGTON, DC, April 26—The nation's largest group of medical records professionals, the American Health Information Management Association (AHIMA), today endorsed the *Medical Information Protection Act* (MIPA). MIPA, which was introduced by Senator Robert Bennett (R-UT), includes several provisions that "will go a long way toward protecting patient information," Linda L. Kloss, RRA, AHIMA executive vice president and CEO, said.

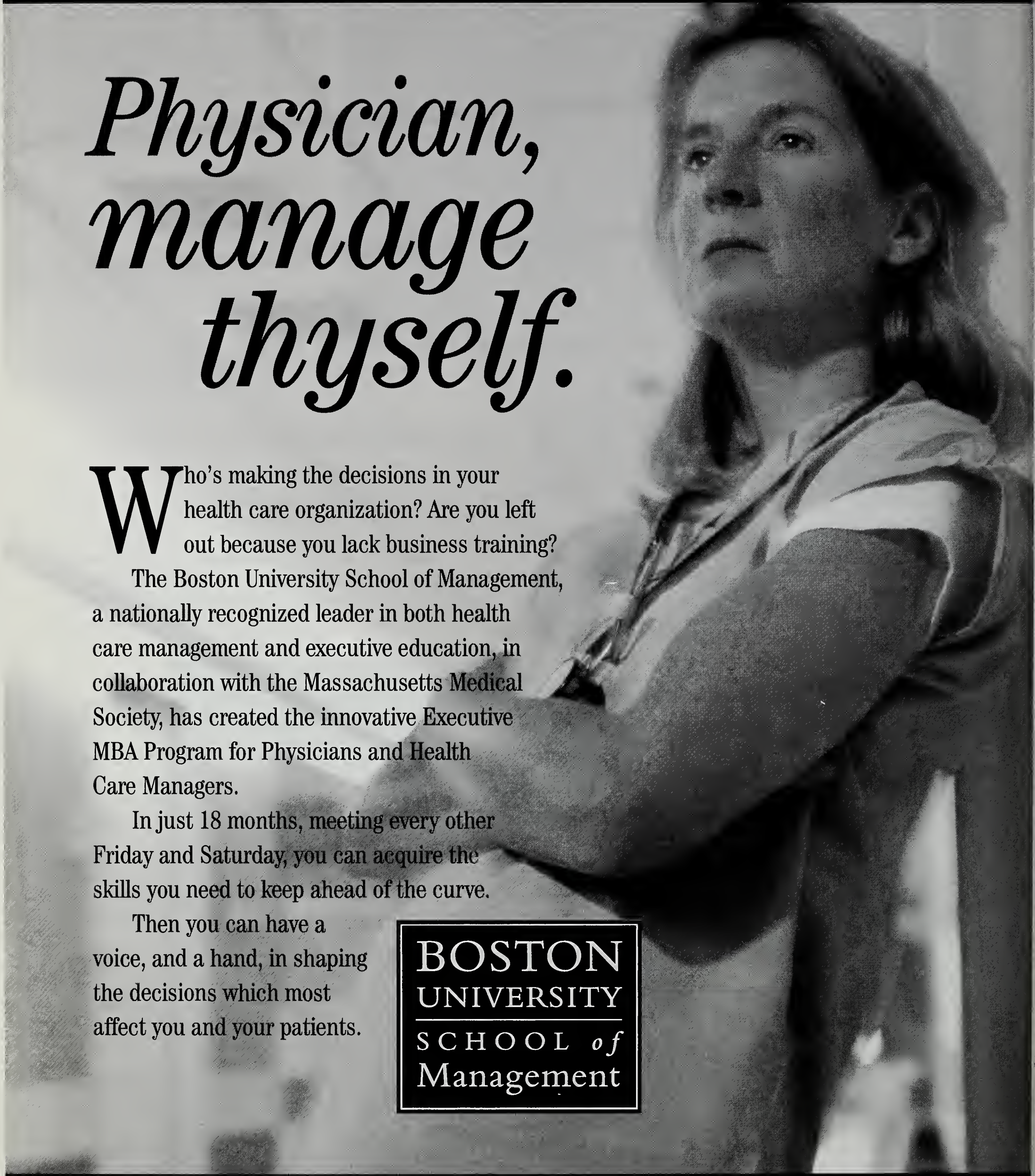
According to AHIMA, MIPA's most important provisions and the reasons they're important include:

- Preemption of state confidentiality laws—Federal legislation should produce a single national standard for handling patient records. By preempting current state confidentiality laws, MIPA would create strong national standards that patients could understand and health-care providers could follow.
- "Having 50 separate laws creates confusion and puts health information at risk," Kloss said. "As long as the federal law is strict and really protects health information, as a nation, we can feel comfortable about preempting state laws."
- Treating all health information the same—Employing unique methods for handling various kinds of health information, such as mental health and genetic information, while perhaps well intended, in the end, makes health information more vulnerable.
- "Health information management (HIM) professionals who work in behavioral health settings know that marking a certain portion of the patient record differently or treating certain kinds of information differently actually endangers it," Kloss said. "Separating certain types of information also sends up red flags, which call attention to it rather than protect it."
- Patient access to their records—MIPA would give patients the right to see and obtain copies of their records as well as ensure their accuracy.
- Patient consent for disclosures to third parties—third parties, such as marketers, database developers, and the like, would be able to gain access to information only if patients give their consent beforehand.

"Over the past several years, Senator Bennet has introduced strong health information confidentiality legislation," Kloss said. "We support his efforts and pledge to continue to work with him, other members of congress, and the Clinton Administration in an effort to pass meaningful legislation this year."

Earlier this year, AHIMA representatives met with members of the Administration to discuss confidentiality issues. AHIMA representatives also have met with several members of Congress to educate them about confidentiality and other issues related to the management of health information.

NOTE: For a summary of MIPA or a matrix comparing current confidentiality bills, call Jack Segal, AHIMA's director of Public Relations, at (312) 573-8508 or contact him via e-mail at Jsegal@ahima.org.



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Clopidogrel: A New Antiplatelet Agent

BRETT FERET, PHARM.D.

CLOPIDOGREL (Plavix®, Sanofi/Bristol Myers Squibb) is an oral antiplatelet agent similar to ticlopidine (Ticlid). It was approved by the FDA in November 1997 and is indicated for the reduction of atherosclerotic events (myocardial infarction, stroke, vascular death) in patients with atheroscleorsis documented by recent stroke, recent MI, or established peripheral arterial disease.

Pharmacology

Clopidogrel is a thienopyridine antiplatelet agent that is structurally related to ticlopidine. Unlike aspirin, clopidogrel does not inhibit platelet aggregation through effects on the arachidonic acid pathway. Clopidogrel selectively and irreversibly inhibits platelet aggregation by directly inhibiting the binding of ADP to its receptors on platelets, thus affecting ADP-dependent activation of the glycoprotein IIb/IIIa complex.[1] Platelets exposed to clopidogrel are affected for their remaining lifespan, which is approximately five to seven days. Clopidogrel does not directly modify the glycoprotein IIb/IIIa complex.[2]

Dose-dependent inhibition of platelet aggregation can be seen two hours after a single oral dose of clopidogrel. ADP-induced platelet aggregation inhibition reaches steady state in three to seven days, where the average level of inhibition is 40% to 60%.[3] Clopidogrel-induced platelet inhibition persists for approximately five days after the drug is discontinued and diminishes in proportion to platelet renewal.[4]

Pharmacokinetics

Clopidogrel is rapidly and at least 50% absorbed after oral administration. The administration of clopidogrel with meals did not significantly modify the bioavailability of the drug. Clopidogrel is inactive and requires biotransformation to its active metabolite, which has yet to be isolated. The cytochrome p450 1A isoenzyme appears to be involved in the metabolism. Peak plasma concentration of the main circulating metabolite, an inactive carboxylic acid derivative, occurs approximately one hour after dosing. Also, this metabolite follows linear pharmacokinetics, thus an increase in plasma concentration is correlated with an increase in dose. The plasma half life of the major metabolite is about eight hours.[2,3]

Clinical Trials

Data supporting the efficacy of clopidogrel are derived from the CAPRIE trial (Clopidogrel *vs* Aspirin at Risk of Ischemic Events).[5] This was a randomized, double-blind, multicenter trial comparing aspirin to clopidogrel in 19,185 patients with documented atherosclerotic vascular disease. Atherosclerotic vascular disease was defined as ischemic stroke, myocardial infarction, or peripheral arterial disease. The primary outcome was the secondary prevention of the combined incidence of ischemic stroke, myocardial infarction, or peripheral arterial disease. Patients were randomized to either 75 mg of clopidogrel once daily or 325 mg of aspirin once daily and followed for one to three years with a mean follow-up of 1.6 years.

Clopidogrel was associated with an 8.7% relative risk reduction in the primary outcome of ischemic stroke, myocardial infarction, or vascular death (5.32% *vs* 5.83%, *P*=0.043) compared to aspirin. The risk of death from any cause was not significantly different between the aspirin and clopidogrel groups (3.25% *vs* 3.05%, *P*=0.71). When the individual subgroups were analyzed, the patients with

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peripheral arterial disease had significantly greater benefit with clopidogrel compared to aspirin (3.71% *vs* 4.86% event rate per year, *P*=0.0028). Those who were randomized to the trial with ischemic stroke showed a nonsignificant benefit from clopidogrel (7.15% *vs* 7.71% event rate per year, *P*=0.26), while those with a myocardial infarction had worse outcomes with clopidogrel (5.03% *vs* 4.84% event rate per year), although this was also not significant (*P*=0.66).

Also, a post-hoc analysis for all 19,185 patients showed a relative risk reduction of 19.2% in favor of clopidogrel in the reduction of myocardial infarction alone (5.2% *vs* 7.6%, *P*=0.008). This indicated that there may be some benefit of using clopidogrel over aspirin in post-MI patients, however further study enrolling only patients with acute myocardial infarction will define better clopidogrel's role for this population.[1,4]

Adverse Events

The safety of clopidogrel has been evaluated in over 11,300 patients, with more than 7,000 patients being treated for more than one year. The CAPRIE study provided us with most of the adverse event data, including data on the incidence of neutropenia.[3] The incidence of neutropenia in CAPRIE was low in both groups and was not statistically significant (0.10% in the clopidogrel arm *vs* 0.17% in the aspirin arm). In comparison, ticlopidine is associated with an incidence of 2.4%.

Drug Interactions

Concomitant administration with aspirin and heparin did not alter the effect of clopidogrel, but clopidogrel does potentiate the effect of aspirin. The safety of chronic administration with both heparin and aspirin has not been established and caution should be undertaken. The administration of naproxen and clopidogrel resulted in increased occult blood loss in healthy volunteers, so NSAID use with clopidogrel should proceed with caution. Although the cytochrome p450 1A isoenzyme system appears to be involved in clopidogrel metabolism, no clinically significant pharmacokinetic interactions have been observed with atenolol, nifedipine, phenobarbital, cimetidine, estrogen, theophylline, or digoxin. However, *in vitro* data have shown clopidogrel to be an inhibitor of CYP 2C9 isoenzyme at high concentrations. Thus, clopidogrel may interfere with the metabolism of phenytoin, tamoxifen, tolbutamide, warfarin, torsemide, fluvastatin, and many NSAIDS.[3]

Administration and Dosage

The recommended dosage of clopidogrel is 75 mg administered once daily without regard to meals. No dosage adjustments are required in renal dysfunction, but data are limited in hepatic dysfunction. Loading doses of 375 mg also have been shown to provide 55% ADP-induced platelet inhibition in one hour and 80% inhibition at five hours.[6] Currently no clinical data are available to support a loading dose of clopidogrel, however the use of a loading dose is currently being studied.

Cost

Clopidogrel (Plavix®®), 75 mg tablet—$2.50.

Place in Therapy

Clopidogrel has been shown to be slightly more effective than aspirin in reducing the combined risk of myocardial infarction, ischemic stroke, and vascular death. Thus, clopidogrel is useful for patients who require antiplatelet therapy. While clopidogrel is without a doubt an appropriate alternative to aspirin-sensitive or allergic patients, routine use of clopidogrel over aspirin requires further study and cost analysis data. An important distinction of clopidogrel over ticlopidine is the absence of neutropenia.

Adverse events in the CAPRIE trial

Adverse Event	**Patients Reporting (%)**		**Severe Event (%)**		**Drug Discontinued (%)**	
	CLO	**ASP**	**CLO**	**ASP**	**CLO**	**ASP**
Rash	6.02	4.61*	0.26	0.10*	0.90	0.41*
Diarrhea	4.46	3.36*	0.23	0.11	0.42	0.27
Indigestion/nausea/vomiting	15.01	17.59*	0.97	1.23	1.90	2.41*
Any bleeding disorder	9.27	9.28	1.38	1.55	1.20	1.37
Intracranial hemorrhage	0.35	0.49	0.31	0.43	0.21	0.33
GI hemorrhage	1.99	2.66*	0.49	0.71*	0.52	0.93*
Abnormal LFT's	2.97	3.15*	0.11	0.09	0.23	0.29

CLO: Clopidogrel ASP: Aspirin * $P<0.05$ *vs* clopidogrel treated patients

Clopidogrel also is expected to be a valuable replacement for ticlopidine when used in combination with aspirin in the prevention of restenosis after stent placement in patients who have undergone coronary angioplasty. While animal models have shown clopidogrel to inhibit high shear stent thrombosis resistant to aspirin and ticlopidine,[7] no clinical data are available yet to support its use. However, the CLASSICS trial (Clopidogrel Aspirin Stent International Cooperative Study), which started in 1998, is a prospective randomized trial comparing ticlopidine and aspirin to clopidogrel and aspirin in patients who will have stents. This study is expected to provide information regarding the efficacy of clopidogrel in combination with aspirin for these patients, as well as the utility of a loading dose of clopidogrel.

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MORBIDITY AND MORTALITY WEEKLY REPORT

Playground Safety—United States, 1998–1999

EACH year approximately 211,000 U.S. children receive emergency department care for injuries sustained on playground equipment,[1] making the use of this equipment the leading cause of injuries to children in school and child care environments.[2,3] In response to the problem, the National Program for Playground Safety (NPPS) at the University of Northern Iowa (UNI) developed a national action plan[4] that focuses on four areas of playground injury prevention: supervision, age-appropriateness of equipment, suitable fall surfaces, and equipment maintenance. During 1998–1999, NPPS surveyed a sample of the nation's child care, elementary school, and park playgrounds. This report summarizes the survey results, which indicate that playground injuries could be reduced by measures such as resilient surfacing below equipment, better equipment maintenance, improved supervision, and use of age-appropriate equipment.

To monitor progress in achieving the national plan, UNI developed and tested a questionnaire in 1997, and during 1998, universities and colleges with leisure and recreation service departments in each of the 50 states were solicited by phone and letter to administer the survey. Once an institution agreed to participate, a contact person received a manual with instructions for selecting the sample and conducting the survey. Eighty percent of the surveys were conducted by university professors, the remainder by undergraduate and graduate students.

Playgrounds were selected using multistage sampling. First, communities in each state were stratified by population: <25,000; 25,000–75,000; and >75,000. Parks, schools, and child care centers in three communities from each stratum then were selected randomly, resulting in 27 survey sites. Next, a list of elementary schools in that community was drawn from local directories (ie, state departments of public education, chambers of commerce, and telephone directories). From this list, elementary schools were selected using a table of random numbers provided in the instruction manual. The same process was repeated for parks and child care centers. A total of 1,353 playgrounds in 31 states (average: 44 per state) were surveyed.

Most playgrounds comprised stand-alone and composite equipment; the two most common pieces were slides (89% of playgrounds) and swings (73% of playgrounds) (Table 1). Although a wide age range of children used the playgrounds, 42% of playgrounds had a clear separation of equipment intended for ages two to five years and ages five to 12 years. In addition, 9% of playgrounds had signs to indicate the age group for which the equipment was designed. While 31% of the surveys were being conducted, children were playing on the equipment. In 23% of these instances, they were playing without adult supervision; 14% of the playgrounds had posted rules emphasizing the importance of supervision.

Appropriate surface materials were found in 75% of the playgrounds; however, 56% had insufficient depths of materials to protect from serious head injury, 38% had failed to provide material in adequate use zones around the equipment, and 20% had exposed concrete footings. Of the playgrounds surveyed, one out of four playgrounds had equipment with missing or broken parts or had equipment that was rusted (37%), splintered (36%), or cracked (11%).

Reported by: M.G. Mack, Ph.D., S.D. Hudson, Ph.D., D. Thompson, Ph.D., National Program for Playground Safety, University of Northern Iowa, Cedar Falls, Iowa. Home and Leisure Team, Division of Unintentional Injury Prevention, National Center for Injury Prevention and Control, CDC.

Editorial Note: Although >80% of the playground equipment surveyed was installed in 1981 or after, and therefore should comply with standards set by the U.S. Consumer Product Safety Commission (CPSC),[5] survey results indicated that school, child care, and park playgrounds are deficient in supervision, age-appropriateness of equipment, suitable fall surfaces, and equipment maintenance. Inadequate supervision contributes to playground injuries[6]; children need the attention of an adult as they play. CPSC advises that children ages two to five and five to 12 years are safer when equipment is separated and

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Table 1.—Number and percentage of safety-related factors in playgrounds, by locale—United States, 1999–1999

	Child care center (n=486)			**Park (n=412)**			**School (n=454)**			**Total (n=1,353)***		
	No.	**(%)**	**(95% CI†)**	**No.**	**(%)**	**(95% CI)**	**No.**	**(%)**	**(95% CI)**	**No.**	**(%)**	**(95% CI)**
Layout												
Installed 1981 or later	450	(93%)	(90%–95%)	324	(79%)	(75%–83%)	380	(84%)	(80%–87%)	**1,153**	**(85%)**	**(83%–87%)**
Combination of equipment	368	(76%)	(72%–80%)	329	(80%)	(76%–84%)	336	(74%)	(70%–78%)	**1,033**	**(76%)**	**(74%–79%)**
Slides present	431	(91%)	(89%–94%)	374	(91%)	(88%–94%)	378	(87%)	(83%–90%)	**1,178**	**(89%)**	**(88%–91%)**
Swings present	324	(69%)	(64%–73%)	361	(89%)	(85%–92%)	276	(63%)	(58%–67%)	**962**	**(73%)**	**(70%–75%)**
Fall surfaces												
Appropriate surface material present	331	(71%)	(66%–75%)	309	(75%)	(71%–79%)	353	(79%)	(76%–83%)	**992**	**(75%)**	**(73%–77%)**
Inappropriate surface depth	256	(56%)	(52%–61%)	223	(56%)	(51%–61%)	241	(55%)	(51%–60%)	**721**	**(56%)**	**(53%–59%)**
Inadequate use zone	183	(39%)	(35%–44%)	161	(39%)	(34%–44%)	150	(34%)	(29%–38%)	**495**	**(38%)**	**(35%–40%)**
Exposed concrete footings	82	(20%)	(16%–24%)	85	(21%)	(17%–25%)	82	(19%)	(15%–23%)	**251**	**(20%)**	**(18%–22%)**
Equipment maintenance												
Missing parts	97	(21%)	(17%–24%)	116	(29%)	(24%–33%)	111	(25%)	(21%–29%)	**325**	**(25%)**	**(22%–27%)**
Broken parts	98	(21%)	(17%–24%)	109	(27%)	(22%–31%)	105	(24%)	(20%–28%)	**314**	**(24%)**	**(21%–26%)**
Rusted equipment	117	(33%)	(28%–38%)	157	(40%)	(35%–44%)	159	(37%)	(33%–42%)	**435**	**(37%)**	**(34%–40%)**
Splinters	87	(30%)	(25%–35%)	67	(38%)	(31%–45%)	88	(41%)	(34%–47%)	**242**	**(36%)**	**(32%-39%)**
Cracked equipment	40	(10%)	(7%–13%)	34	(12%)	(8%–16%)	28	(10%)	(7%–14%)	**102**	**(11%)**	**(9%-13%)**
Supervision												
Children playing	96	(21%)	(17%–24%)	186	(46%)	(41%–50%)	127	(29%)	(25%–33%)	**410**	**(31%)**	**(29%–34%)**
No adult supervision	12	(12%)	(6%–18%)	41	(22%)	(16%–28%)	42	(33%)	(25%–41%)	**96**	**(23%)**	**(19%–27%)**
Supervision rules posted	46	(10%)	(7%–13%)	82	(20%)	(16%–24%)	56	(13%)	(10%–16%)	**184**	**(14%)**	**(12%–16%)**
Age-appropriateness												
Designed for ages 2-12 years	240	(51%)	(46%–55%)	344	(84%)	(81%–88%)	198	(45%)	(40%–49%)	**783**	**(59%)**	**(56%–62%)**
Separation of equipment	127	(53%)	(47%–59%)	128	(37%)	(32%–42%)	71	(37%)	(30%–44%)	**326**	**(42%)**	**(38%–45%)**
Signage for age level	21	(10%)	(6%–14%)	20	(7%)	(4%– 9%)	16	(10%)	(5%–15%)	**57**	**(9%)**	**(6%–11%)**

*Site was unknown for one playground; denominators vary depending on the specific factor being examined.
†Confidence interval.

grouped for each age category.[7] Children who play on equipment inappropriate for their size, strength, and decision-making ability increase their injury risk. Because 70% of playground injuries involves falls to the ground,[8] the amount of area covered beneath equipment, and the type and depth of the surface material, are critical. Hard surfaces, such as asphalt, concrete, dirt, and grass, should be replaced by shock-absorbent surfaces, such as sand, wood chips, small round gravel, and rubber. Once an adequate zone of material is installed, it must be maintained at a sufficient depth to cushion a child's fall.[7,8] Poor equipment maintenance also contributes to playground injuries.[6] Continual inspection and regular maintenance and repair of all equipment and surfaces are essential to playground safety. The NPPS plan outlines strategies at local, state, and federal levels for achieving improvements in all of these areas.[4]

These survey results should be interpreted cautiously because of at least four limitations. First, interrater reliability is unknown. Second, a single assessment may not reflect accurately seasonal or time-of-day differences in safety. Third, observation of the playground does not measure maintenance and supervision policies, although it does reflect actual practice. However, in a number of schools and child care centers, researchers were not permitted to be in the playground while children were present. Thus, the data on supervision may not reflect true practices. Finally, the sample size is small relative to the total number of playgrounds in the United States.

To provide a safer play environment, playgrounds must have adequate supervision, be maintained continually, and be equipped with age-appropriate equipment and resilient surfaces. Further information about the survey and safer playgrounds is available from the National Program for Playground Safety, telephone (800) 554-7529 or on the World-Wide Web at <http://www.uni.edu/playground>.*

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*References to sites of nonfederal organizations on the World-Wide Web are provided solely as a service to *MMWR* readers and do not constitute or imply endorsement of these organizations or their programs by CDC or the U.S. Department of Health and Human Services. CDC is not responsible for the content of pages found at these sites.

Commentary

Case of First Impression: State Complaint Against Physician Dismissed

Health care counsel have been at a significant disadvantage in defending physicians in certain licensure proceedings before the Connecticut Medical Examining Board. The problematical situations derive from patient complaints about treatment many years prior to the filing of a formal protest. While the Department of Public Health is enjoined by a specific statute to *complete* its investigation of a complaint within eighteen months, there is no statute of limitations applicable to the filing of the complaint itself. Moreover, the eighteen month investigatory period has been rendered rather open ended by recent Connecticut Supreme Court decisions.

As a result, the courts have had no choice but to compare the treatment received by physicians before Connecticut health care regulatory agencies with overarching constitutional requirements of fundamental fairness and due process which, by their very nature, are elastic and subject to differing application based on the facts of each case. In a trail breaking decision in 1998, *Baer v. Connecticut Board of Examiners in Podiatry*, Hartford-New Britain Judicial District Superior Court Judge Robert McWeeny threw out a podiatrist's license revocation based on an alleged violation *10* years before the hearing wherein, among other matters, the podiatrist had disposed of his treatment records in keeping with applicable Connecticut record retention requirements.

Following *Baer,* the question was whether the court would take a similar approach in a case involving a physician. Judge McWeeny recently was presented with just that opportunity in *Koff v. Connecticut Medical Examining Board* and he seized it decisively.

In *Koff*, the treatment occurred 44 months prior to the filing of the complaint. The Department of Public Health did not file charges against the physician until almost eighteen months after he was notified of the complaint. Most interestingly, apparently after fully considering the impossible unfair chronology which it faced, the *Department* requested permission from the Connecticut Medical Examining Board to withdraw the charges. It was rejected by the Board which subsequently overruled a similar request by the physician.

Analogizing to the requirement of speedy trials in criminal cases, Judge McWeeny pointed out that courts must balance the needs of the justice system with a party's constitutional rights even in "the civil licensing context...." "(A licensee's) right to a meaningful hearing at a reasonable time" must be harmonized, he stated, "with the State's interest in protecting the public from medical malpractice." Obviously, the Court noted, the physician's recollection of the incident was not going to be as sharp as it might have been if the proceeding had been commenced much earlier. Judge McWeeny also observed that the Board was placed in the challenging position of determining what the standard of care might have been in 1990 in a hearing conducted in 1997.

Nurses who witnessed certain aspects of the treatment were no longer available to testify. These circumstances, the court decided, required that the sanctions against the physician be dismissed.

Hopefully, Judge McWeeny's decisions in *Koff* and in *Baer* will encourage the Department of Public Health to move with greater alacrity when bringing charges against licensed health care professionals, especially where, as here, the alleged violation was based on a single alleged malpractice incident. Licensure proceedings should be based on *serious* deviations from the standard of care and must be swift and sure lest we add further impetus to those in the physician community who have begun circling the wagons as a result of managed care degradations. *Koff v. Connecticut Medical Examining Board*, Docket No. CV98-0492722, (9 February 1999).

Elliott B. Pollack, Esq.
Pullman & Comley

50 Years Ago

From *The Connecticut State Medical Journal*

June 1949

Old Age

J. ALFRED WILSON, M.D., Meriden
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THE AGING POPULATION

The changes in the age of the population have thrust new problems on the country. There were two and one half times as many people over 65 years of age in 1944 as in 1900. These people have come to the front as being much more important as to numbers than before. Their physical status and economic condition became important with their increase as a group. Our duty as physicians is to see that this group of our population is comfortable and that many of the symptoms of old age are kept in the foreground in order that we may more properly take care of them. We are not able to rehabilitate them and return them to the activities of their younger life. We are only able to make their declining years more livable. Many are feeble and childish but some are well preserved and wise. They may be able to carry on important and difficult work. They have many years of experience which enables them to do work that much younger individuals are not able to do.

Previously the elderly group in the population was so few that little thought or attention was paid to them. In some countries the men were especially revered and would be the head of the family until death. Often the women did not fare so well. In other groups, such as certain of the American Indians, they would be given a few sticks and sent away from the tribe to die. Those who reach old age go through the processes of growth, maturity and then senescence. Many refuse to face old age with equanimity. Many have worries of failing health which is frequently coupled with economic instability and many are unable to earn as much as they did in former years. A consideration of the percentage of the population over 65 years of age shows a very small number who are economically able to take care of themselves. The members of the population who are over 65 years of age are living human beings. They differ in temperament, desires, needs and in past experience. These facts make it difficult to reduce tables and statistics to any practical purpose to the individual. Each member of this group may have something he can contribute to mankind which is different from that which all the other members can. Statistics or tables of the aged have no relation to each individual's usefulness or personality. One may be irritable, selfish, in poor health and unsocial at 65, or healthy, generous of the experience of his years and a highly respected citizen at 85.

All who have studied, or who are studying the problems of the aged are aware of the fact that there is an increase in the number of members of the race who reach old age and whose well-being must be kept in mind. To neglect this may mean serious trouble to our country and to the world. Social legislation, such as the Social Security Act, can relieve some of the economic problems of the aged but falls far short of caring for all their problems. There are many more. Very little has been done to lessen the burden of the housing and care of the aged. A few elderly people are wealthy enough to be economically secure, but if others are not wanted by families or friends, and are unable to take care of themselves, they must be considered a burden to society.

A comfortable place in which to live, with care from others, must be provided for the aged. In many of our smaller communities and in the country, families live in

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From the Medical Service, The Meriden Hospital—Reprinted in part from the Meriden Hospital Bulletin, 1949:2, No. 4

homes sufficiently large to provide accommodations for one or two elderly persons who can be taken care of very easily by the fairly large family groups. These old people can do many light and useful tasks about the home and on the farm. They are able to keep themselves busy and satisfied with these minor labors. They can entertain themselves in some of the small centers of population by congregating in small groups. In the larger centers of population, the question of where these people shall live becomes a major issue. The collection of large numbers of people in one area shrinks the available space for living. The apartment consisting of a few rooms which are smaller than those found outside of the city areas, is a setting in which it is practically impossible for the average family to accommodate any older persons. The cost of living in the city is usually higher thus forcing more worries on the aged. They have already reached the time in life when their earnings are much lower than formerly, since many have been retired or can no longer do any work that would earn them a sufficient living.

Nursing homes and hospitals for the chronically ill are woefully inadequate in point of bed capacity to care for this group. They are usually overcrowded and, because of the increased cost of labor and supplies today, are grossly understaffed. There are a few privately endowed institutions in the country that are able to take good care of the aged. These, however, are so few in number that facilities are available for only a fraction of the people who should be in an institution. Some have long waiting lists and it has been estimated that an aged person must wait five years after applying before admission to the home is possible. Some of these institutions are supported by religious groups or fraternal organizations and these, very properly, give first consideration to their own members.

Old people have many problems after they enter an institution for the aged. Many have had no experience in living in close proximity with a large number of persons of a similar age. Some adjust easily to the new method of living. Others find much difficulty and are not happy. They carry into the institution with them their experiences of youth and middle life—experiences which were a source of irritation and injury. Many have failed to gain material success or to have acquired sufficient resources to stand them in good stead in their old age and the mere fact that they must depend on the charity of others interferes with their comfort. Many of the injuries suffered by these people may become intensified and more prominent after their entry into a home for the aged. The old people with pleasant personalities and mature judgment who enter a home may, and do, thoroughly enjoy their final years, living longer, and without the cares or worries which might have been theirs had they pursued their former way of life.

Much might be said about the education and training of the middle aged for old age. Many suggestions might be made, and perhaps in the future they can be brought forward to help. Primarily, a greater effort should be made for all members of the community to conserve more of their resources. The reckless spending of the last two decades does not tend to increase or improve the welfare of our population. Many efforts are being made to conserve the health of the population. Many minor ailments can be treated early to prevent their becoming major in importance. In the living of life, many factors mold our personalities. All of these should be such that life could be considered successful and accomplished. Our way of life should be so shaped that perfection is sought by all. Science and medicine should seek to control the physical ills and society should provide the elements that make for the good, moral life.

John Dewey wrote that each individual should be given "The continual chance to have intrinsically worthwhile experience and useful outlets for the maturity and wisdom gained in their experience." Our present civilization is fast being awakened to the problems cited. In the future, communities can provide comfortable abodes, recreation, health measures and education for the aged. The aged, as a group, will, to a certain extent, be segregated from the younger generation. If such segregation has to be practiced, it must be such that the evening of life is comfortable and happy. These problems are common to all lands and to all peoples. They are not insurmountable but do require much thought and study. The awakening is slow but signs appear on the horizon that they are being taken up by the best minds in our civilization.

Senescence is the condition of growing old. It is dependent on many unknown principles. Perhaps one of the best ways to study senescence is to consider, first, organic changes, and second, the mental changes which are generally due to the organic changes. The organic changes of the cells of the body depend on growth, maturation, repair and deterioration. The time element varies greatly in different individuals. One may be senile at 45 and another person be very vigorous at 75. Many observers have found, or believe, that slow initial growth makes for a long life. Rapid early growth makes for early senescence or rapid disintegration. The gradual decline of the cells in the body has been explained by several theories. Minot thought there was a progressive loss of energy. Metchnikoff explained that old age depended on the poisons circulating in the blood. Lorand and Gley thought that old age was dependent on the gradual lessening of function of the glands of internal secretion.

Dr. Carrel in "Man the Unknown" concluded that the process of aging was due to the inability of the tissues to eliminate waste. The cells deplete the medium and indirectly introduce into life processes a chemical destructive activity. Others believe that the death of nerve cells causes old age.

Heredity plays a great part in longevity. Its exact role is unknown and the only knowledge we have is based on the history of the individuals in a family group. As the late Lucas Miller[1] puts it, "To live each moment to its full capacity, to adopt sound health habits in youth and a serene philosophy in middle age, will enable the average man to meet advancing years with cheerful equanimity and to look upon approaching death without apprehension."

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News from Yale University School of Medicine

Louis H. Nahum, associate professor of physiology, and Hyman M. Chernoff, research fellow in physiology, have announced three major discoveries about the interpretation of electrocardiograms: using x-rays to map the position of the heart geographically in the body, the scientists showed what each portion of the organ contributes to the general electrocardiographic picture; they demonstrated that the lower portion of the heart recovers more rapidly during a heart beat than the upper part and is warmer in temperature; and they provided the first clear explanation of what happens to the various segments of the heart when the body receives insufficient oxygen.

The lower part of the heart—which comprises about one sixth of the entire organ—has a more rapid "recovery rate" than the upper portion of the organ following contraction. This is caused by the fact that it is warmer than the rest of the heart since it lies on the diaphragm and liver. This temperature difference had been suspected but never previously determined.

A peculiar pattern is set up in the electrocardiogram when the human heart suffers from a lack of oxygen—at high altitudes, in people during the first few minutes after a coronary thrombosis attack, during acute bleeding and early asphyxiation. The Yale investigations have disclosed the first complete explanation of what happens to a heart when the body suffers a loss in oxygen. They revealed that the change in the electrocardiogram results from a more rapid recovery in various segments of the heart.

One method of finding out whether or not a heart is behaving normally is to have a man exercise vigorously prior to being tested with an electrocardiogram. This exercise will show whether or not the heart is suffering from a lack of oxygen. If it is, then a positive diagnosis of heart disease can be made when considered along with other clinical evidence and the new Yale findings will show what part of the heart is thus affected.

The relationship of the electrocardiogram to diagnosis of disease is considered especially significant. Dr. Nahum and Dr. Chernoff found that certain changes which occur in the electrocardiogram after the onset of coronary thrombosis and certain other diseases are due to a slowing up of the recovery process in the affected part of the heart.

This report by the two doctors provides the first adequate explanation of how the "T-Wave" of the heart can be interpreted. They found that this wavy line on the electrocardiogram results from differences in the rate of recovery of different parts of the heart. If some disease or other disturbance strikes the body and upsets the normal recovery rate of any segment of the heart, this factor will be reflected in the "T-Wave" and more complete diagnosis can be made.

The findings announced are direct applications of the new theory of interpreting the electrocardiogram, the "Zonal Interference Theory," which the Yale men disclosed to the American Physiological Society a year ago. It contradicts ideas held for a quarter of a century and is based on the concept that it is the interaction of opposite electrical forces from different zones of the heart which creates each electrocardiogram.

The theory enables physicians to find exactly where a blood clot may have formed, where "skips" in heart beats originate and other phenomena which have previously challenged accurate diagnosis.

The "Zonal Interference Theory" and the accompanying charts and diagrams have made it possible to map the action of human and animal hearts without opening the chest by surgery, previously the only accurate method of finding out when an electrical stimulus would arrive at various portions of the heart.

American Medical Accreditation Program

☆ The Connecticut State Medical Society and its affiliate, MD Advantage, together with the American Medical Association, have begun implementation of the American Medical Accreditation Program—**AMAP**^{sm} in Connecticut.

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FROM THE EDITOR'S DESK

Observe, Discover, and Talk

The recent tragic instances of gun-toting violence in high schools in America have given rise to heavy commentary and speculation in the media as to the possible causes for the behavior of previously sensible young people to go monstrously awry.

Rejection is a common theme among the many explanations for the horrifying episode in Littleton, Colorado, and for the less horrible but equally- troubling episode in Georgia in April and May. Rejection by teenage peers jumps to the top of the list in these and in previous shootings in our schools. After that comes our national fascination with guns and their easy availability to youths; then the focus turns to adults, mostly the parents, but including all of us, physicians as well.

"How is it possible that parents could fail to observe their teenagers making bombs in the garage?," we ask. This is no subtlety, this is a train wreck on the tracks of a young life. "Was there no alert before this stage was reached?," we wonder. Too busy? Too focused elsewhere? Heavy on acquisition, light on observation? In our homes, in our workplaces, and in our relationships with each other, are we so heavily engaged with the business side of life that we become blind or deaf to signals from the human side?

As I consider the recent spate of tragedies, my favorite Robert Frost poem "A Time to Talk,"comes to mind:

> When a friend calls to me from the road
> And slows his horse to a meaning walk,
> I don't stand still and look around
> On all the hills I haven't hoed,
> And shout from where I am "What is it?"
> No, not as there is a time to talk.
> I thrust my hoe in the mellow ground,
> Blade-end up and five feet tall,
> And plod: I go up to the stone wall
> For a friendly visit.

If we convey to someone whose "horse has been slowed to a meaning walk" that we are occupied by "all the hills we haven't hoed," then a dialogue that could be meaningful or even lifesaving may not take place. Frost poetically begs us not to shout, "What is it?" from a distance because it conveys a message of rejection, major or minor in its meaning and impact, who's to know.

Frost's metaphor goes further in placing emphasis on the value of talk compared with work when the signal from another has been seen or heard. The hoe thrust in the ground blade end up is a signal to any passerby: "I was working in this field and paused for something important; I will be back to finish my work." The alternative would be to lay the hoe on the ground, out of sight so that our passerby would know nothing of the job interrupted, or the important call that trumped the demands of the job.

What does all this have to do with doctors and doctoring? Patients feel rejected sometimes,too, and some of those who say so use terms like "drive through medical care." This comes without the tone of respect for efficiency that might be heard from the managed care types. No, there is a tone of accusation that there was no time to talk.

Medical professionals depend heavily upon their senses to observe and discover. Observation, discovery, and common sense are part of the territory of doctoring. In our interactions with patients, families, neighbors, colleagues, and others in our homes and workplaces, the ability to observe and discover, may lead to an opportune moment—a time to talk. That talk, that antidote to the poison of rejection coming from the respected, even revered person of the physician, can surely move the rheostat of human feelings towards peace, and away from tragedy and pain.

H. David Crombie, M.D.
Editor

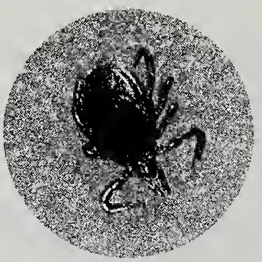

Fig. 1: Deer Tick

YOU WOULDN'T LEAVE SOMETHING THIS DANGEROUS ON YOUR BODY.

OR WOULD YOU?

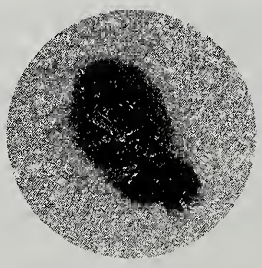

Fig. 2: Melanoma

Melanoma is the deadliest form of skin cancer. In fact, one person an hour in the U.S. dies from the disease. Fortunately melanoma can be completely cured if it's caught early enough. So examine your skin regularly. If you find a blemish larger than a pencil eraser, multi-colored, asymetrical or irregular at the edges, you may have melanoma and should see your dermatologist. For more information on melanoma, call 1-888-462-DERM, or visit www.aad.org.

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STEPHEN R. KATZ, M.D.

Education:

1957	Bronx High School of Science—Academic Diploma
1961	New York University, University College of Arts and Science—B.S., magna cum laude
1964	New York University, School of Medicine—M.D.

Professional Experience:

1964–65	Internship: Ward Medical Service, Barnes Hospital (Washington University School of Medicine), St. Louis, Missouri
1965–69	Resident and Chief Resident in Obstetrics and Gynecology: New York University, Bellevue Medical Center, New York, New York
1965–69	Assistant Clinical Instructor, Department of Obstetrics and Gynecology, New York University School of Medicine
1969–71	Major, Medical Corps, United States Army; Headquarters Detachment, Third Army, Fort Bragg, North Carolina
1971–94	Private Practice of Obstetrics and Gynecology: Fairfield, Connecticut
1994–present	Private Consultant in Healthcare Policy and Legislation

Major Academic Honors Received:

	Beta Lambda Sigma—Phi Beta Kappa—Alpha Omega Alpha
1961 and 1964	New York University Founders Day Awards
1964	Alpha Omega Alpha Award for Excellence in Medicine

Professional Licensure:

1965	New York, (presently inactive)
1971	Connecticut

Societies and Professional Associations:

	Life Fellow, American College of Obstetricians and Gynecologists
	Founding Fellow, Bellevue Obstetrical and Gynecological Society
	Member, Association of American Physicians and Surgeons
	Member, American Medical Association
	Member, Connecticut State Medical Society
	Member, Fairfield County Medical Association
1969–92	Member, American Fertility Society
1971–91	Member, Greater Bridgeport Society of Obstetricians and Gynecologists

Professional Recognition and Appointments:

1965	Diplomate, National Board of Medical Examiners
1971	Diplomate, American Board of Obstetrics and Gynecology
1974–95	Member, Medical Advisory Council (formerly Medical Practice Committee), Connecticut Section of the American College of Obstetricians and Gynecologists
1975–91	Secretary, Greater Bridgeport Society of Obstetricians and Gynecologists
1974–78	Member and Corresponding Secretary, Board of Directors, Professional Standards Review Organization of Fairfield County
1978–98	Delegate, Connecticut State Medical Society House of Delegates
1983–93	Member, Executive Committee of the Connecticut Society of the American Board of Obstetrics and Gynecology
1985–89	Senior Attending and Chief of a Service, St. Vincent's Medical Center, Bridgeport Connecticut
1994–present	Member, Board of Trustees of the Fairfield County Medical Association
1994–98	Associate Councilor to the Connecticut State Medical Society
1996–present	Member, Committee on Ethical and Judicial Affairs, Connecticut State Medical Society
1996–98	Member, Committee on Data Study, Connecticut State Medical Society
1998–99	President-elect, Connecticut State Medical Society

Hospital Staff Affiliations:

1971–97	Bridgeport Hospital, Bridgeport, Connecticut
1971–94	St. Vincent's Medical Center, Bridgeport, Connecticut
1971–88	Park City Hospital, Bridgeport, Connecticut

Research Experience:

1961–62	Pituitary Control of Glucose Transport in muscle
1963–64	Estriol Transport and Metabolism in Fetal Membranes

Publications:

Katz SR, Levitz ME, Dancis J: Relative Transfer of Estriol and it's Conjugates Across the Fetal Membranes in vitro, *Endocrinol* 1965; 76:722

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Katz SR: The Dream That Never Was: The Rise and Fall of Socialized Medicine in the United States of America, *Conn Med* 1998; 62:619

Katz SR: American Medicine in 2010—A View From the Bridge, *Medical Sentinel* 1999; 4:67

The New President's Message

Professionalism and Ethics: The Core Matters

Address to the Connecticut State Medical Society House of Delegates —12 May 1999

Good afternoon, ladies and gentlemen. I would like to thank you for the honor that you have bestowed upon me by my election to the office of President of the Connecticut State Medical Society. I hope that my coming year in office will help to strengthen the bond between our organization and its members. Everything that CSMS does should have as its focus the needs and aspirations of our members, because by serving the membership, CSMS ultimately advances the quality of health care of every citizen in the State of Connecticut.

The past accomplishments of CSMS on behalf of its membership are legion, and they are displayed on the banners hanging on the walls of this meeting room. Many of you have participated in the formation of some of our more notable recent accomplishments including CMIC, the CSMS/IPA, and M.D. Advantage, our MSO. Most of you continue to participate in these enterprises in various ways. I have no intention of proposing any such capital-intensive creations for the coming year. Rather, I will ask us all to focus our efforts on some matters that lie at the very core of medical practice; matters that we so take for granted that we virtually never speak of them, and yet they are the essential justifications for the very existence of an organization such as CSMS. I am speaking of course of our professionalism, and of medical ethics. My reason for this choice of subject is simple. The fact of the matter is that behind all of the daily political posturing, behind the spate of new laws concerning medical practice over the past 30-plus years, and behind all of the health care policy discussions that we hear almost on a daily basis, there is a very palpable assault being made on our professional status, and on the ethical basis of medical practice. Indeed, we are in the midst of a very active effort on the part of some policy planners to change the very nature of a physician's professional obligations. And as these efforts succeed little by little, they change the very fabric, ethic, and nature of American society itself.

We can approach these matters from many points of view. Today, I will touch briefly on the questions of how we view ourselves as professionals, and the reciprocal relationships between our patients and ourselves. Both aspects are under assault, with policy planners actively seeking to change the very physician-patient relationship by their machinations. And, to a worrisome degree, they are succeeding. Certainly at a minimum it can be said that over the past several years we have been coerced into financial situations which in essence required a significant surrender of our professionalism, although at first we may not have recognized these arrangements as representing a significant and dangerous retreat on our part.

The traditional financial arrangements surrounding professional services have been summarized in many ways, over many millennia. The Talmud, in its section on medical care in poor villages, takes care to emphasize the need for restraint and a charitable outlook in such situations. Yet at the same time, it stresses the importance of the assertion of professional value and autonomy even in such constrained circumstances. The Talmud teaches, rather wisely and perhaps prophetically, that "the person who does not know the value of his own service is worth nothing."

One of the best statements of this aspect of professionalism that I know of is contained in a legal opinion written by Circuit Judge Elbert Tuttle which was passed on to me by a friend. Judge Tuttle, in adjudicating a legal dispute over fees wrote, in part,

> What is a professional? The professional man is in essence one who provides services. But the service he renders is something more than that of the laborer, even the skilled laborer. It is a service that wells up from the entire complex of his personality ... in a very real sense his professional service cannot be separate from his personal being. He has no goods to sell, no land to till; his only asset is himself. It turns out that there is no right price for his service, for what is a share of a man worth? If he does not contain the quality of integrity he is worthless. If he does, he is priceless. The value is either nothing or it is infinite.
>
> So do not try to set a price on yourselves. Do not measure out your professional services on an apothecary's scale and say, "only this for so much ..." Do not debase yourselves by equating your souls to what they will bring in the market....
>
> ... Certain it is that man must eat, so set what price you must on your service. But never confuse the performance, which is great, with the compensation, be it money, power, or fame, which is trivial."[1]

But we have indeed allowed ourselves to be "debased," as Judge Tuttle puts it. Sometimes by coercion, often by being cajoled into "taking the lead" as it were, in matters that have, in fact, already been decided and promulgated by others.

Thus we initially accepted trivial Medicaid fee schedules because, we felt, they represented appropriate acts of charity. Then we had Medicare price controls forced upon us. Finally, we have been cajoled into "cooperating" with the manipulative nightmares known as RBRVS and, more recently, E/M guidelines. These monstrosities have been used to torture and debase us ever since their creations by the use of the simple threat, "if you don't cooperate with these, things could get a lot worse." Now we are told that we had better "code to five digits!"

How have these events affected our professionalism? I vividly recall a conversation I had with a prominent neurologist back in 1994 about the Clinton Health Plan. He liked the plan because, as he put it, "At least we will be paid something for everything we do." Something. For everything we do. How totally devoid of professionalism! How debased some of us have become! It is truly sad.

More important to our professional standing and reputation however, is the reciprocal relationships between our patients and ourselves. This deeply personal, one-on-one relationship has been celebrated and enunciated over the millennia in numerous medical oaths such as those of Hippocrates and Maimonides.[2] We have been taught that a physician's duty has always been to the individual patient seated before him, confused, in pain or other distress, and seeking the help of the person who the patient gently refers to as "my doctor." This relationship is one of mutuality, and of trust. And this is as it should be. There can be no higher calling than this. Health care, unlike corporate industrial products, ultimately devolves into direct person to person service. A profit can be extracted from this relationship only by depriving the provider, or the recipient, or both.

Yet there are loud and persistent demands today for us to switch from our focus on the patient before us to what is euphemistically called "population based medicine." Indeed one recent academic paper[3] blatantly stated, "we propose that devotion to the best interests of each individual patient be replaced with an ethic of devotion to the best medical interests of the group for which the physician is personally responsible." Those same authors also ask us to believe that, "... If the 'system'... denies what is optimal [for the patient], the physician can still claim full adherence to the traditional ethic of devotion to each patient's best medical welfare, as long as the system allows care that is at least minimally acceptable."

Still others have suggested what I call a "neo-ethical solution" to the very real problem that managed care has with reasonable, informed consent. It has been suggested that doctors should now subscribe to a so-called "transparency standard" under which physicians "disclose the actual thought processes that led them to a clinical decision without having to elaborate excessively on how others might have approached the same situation."[4] Now that's a novel approach to "informed consent!" At least I can see why it is called a "transparency standard." It does have a "Through the Looking Glass" look to it!

In these examples, and in many other ways we are asked to abandon, or at least limit the need and care of each individual patient. We are also asked to abandon rigors of the scientific method in favor of so-called "evidence-based medicine" wherein a preponderance of the evidence—that is, 51%—is "good enough." And that 51% threshold is to be determined not by our own individual intellectual efforts, but by our "representatives." These "representatives" are selected by some obscure mechanism. They come together under the sponsorship of one interested party or another. They review the literature supplied to them by the convenor. Then they "vote democratically" on the matter before them. Now that's science!

How far we have been led astray from scientific medicine by politicians, business leaders, and policy wonks! And we have allowed much of this to occur without voicing any objections. Often, we have made only minor efforts at "smoothing out the edges" of what were clearly bad proposals that should have been vigorously and unalterably opposed by all of us. Often, we have accepted unpalatable and inappropriate compromises when a firm stand based upon sound professional and ethical principles should have been held and vigorously defended. All too often, both as organized medicine and as individuals, we have failed to "just say 'No.'"

And ultimately, it is our patients who pay the price for our unwillingness to defend our time-honored traditional medical ethics, because population-based medicine can never be ethical. It leads to non-treatment and to non-information. And believe me, if some of the social planners who are hard at work in so-called "futilitarian think-tanks" have their way, it will lead to noninformed euthanasia in short order. And this latter conclusion has solid, scientific evidence to back it up. Just go back and study the evolution of German medicine in the Third Reich.[5]

The truth of the matter is that care cannot be managed. Only money can be managed. And when we hear talk about "competition among managed care plans," we are merely listening to discussions of variations in rationing techniques. The net result of all this social planning that has led our rush into employer based, corporate-dominated, government-ruled managed care has been a rise in the number of uninsured Americans from 28 million in 1993 to 43 million in 1998. That is a 54% increase in the medically uninsured that has occurred even as our national unemployment rate is reported to have fallen from 5.5% to an unprecedented 4%! How many more will lose their health insurance in even the most modest of economic downturns? The thought is mindboggling! And we physicians will have contributed to this problem by allowing others, in jobs and professions that conform to no particular ethic of any sort, to bend and mutilate our multi-millennial principles!

Clearly, I have just glossed over many important issues today. I hope to be able to address some of these issues in more detail over the coming year via the "President's Page" in *Connecticut Medicine*. But before I close, I believe that it is important that I leave you with a vivid image of how I view our profession at the present time. I was going to do this with a Russian folk tale, but I couldn't find one that would fit. So I'm going to tell you a phony Russian folk tale that was written by Dr. Miguel Faria, the editor of the *Medical Sentinel*.[6]

He tells the story of Stalin lying on his deathbed. Before him, are two of his deputies and possible successors. He sends an aide outside to catch some birds and place them in a cage. Reaching into the cage, Stalin removes one of the birds and hands it to the first deputy. The man is so fearful of appearing incompetent before Stalin that he holds the bird too tightly and promptly crushes it. Stalin looks at him with disgust.

Stalin then hands a bird to his second deputy. Aware of what has just occurred, the deputy holds the bird so loosely that it quickly escapes his grip and flies away.

Saying nothing, Stalin reaches into the cage and removes another bird. Gently he grabs the bird by the foot and dangles it upside down before him. Systematically, he then plucks out all of the bird's feathers. When he has plucked the bird clean, he drops it gently into the waiting palm of his other hand. The bird sits quietly in his hand, cowering and shivering.

"You see," says Stalin, looking down at the bird and smiling benevolently, "he is even grateful for the warmth radiating from my palm."

Ladies and gentlemen, the House of Medicine has been upended and is being plucked by myriads of people who have no business meddling in medical matters! And unless we speak up forcefully now, and assert both our ethical principles as well as our right to lead by virtue of our knowledge and expertise, we will soon lie shivering in the hands of government and the monied incorporations, grateful for anything that is cast our way! The entire Federation of Medicine, the Connecticut State Medical Society, and each one of us as individuals must act in every way that we can to stop this out-of-control perversion and destruction of American medicine. Because if we fail to act—and act now—it is our patients who will suffer as a result of our inaction for decades to come!

This, then, is the capital enterprise that I propose for us for the coming year. Let us begin.

> The end of democracy, and the defeat of the American Revolution will occur when government falls into the hands of the lending institutions and the moneyed incorporations.
>
> —Thomas Jefferson

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Neil J. Grey, M.D.
Medical Director

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Director

REFLECTIONS ON MEDICINE

Society's Medicalization: Manifestation of the Great Disruption?

ROBERT U. MASSEY, M.D.

> All kinds of problems now roll to the doctor's door, from sagging anatomies and suicides, from unwanted childlessness to unwanted pregnancy, from marital difficulties to learning difficulties, from genetic counseling to drug addiction, from laziness to crime. . . .[1]

RENÉE FOX writing some 22 years ago on the medicalization of society noted that we, as a society, had regarded unwanted or deviant behavior first as sin, then as crime, and finally as sickness.[2] Peter Sedgewick called this "the progressive annexation of not-illness into illness."

The disasters at Littleton, Colorado and Conyers, Georgia, added to other recent similar tragic episodes of violent, murderous behavior in children, was certain to provoke wake-up calls all over the place urging cures for this not so surprising but virulent illness in our midst. We seek a new tranquilizing drug, a virtue-producing potion, or perhaps group therapy classes to do the trick. Maybe sessions in character building will be added to sex education in the public school curriculum (a 125-million dollar proposal for character education programs may come before the House). A piece in *Time* (24 May 1999) summed up the way these programs might go:

> And they are transmitted by the familiar methods of today's pedagogues: posters and banners, role playing and sharing, multi-culti storytelling and words of the week—all the cheerful paraphernalia that makes the modern American classroom seem like a Maoist re-education camp run by Barney the dinosaur.

The attraction of turning violence into a medical problem, a mental health issue, is that it avoids holding anyone accountable for his own behavior. The media, the Internet, rap music, single-parent households, addiction, bizarre cerebral wiring, bad genes—all have conspired to bring the place down. Too much money, not enough money, greed, too many cars, guns, or people—we all have our own diagnosis and each of us is ready with a therapeutic program. A sick society? Then find the therapy so we can get on with our accustomed affairs.

Few will deny that all the indices of social decline make only too clear the notion that Western society has been in deepening trouble for the past 30 or 40 years. Many of us old-timers, the over-the-hill crowd, have believed that our generation was the last of the good guys, that it all started downhill when we hit 37 and our kids turned 13 and turned off.

In his essay "The Great Disruption: Human Nature and the Reconstruction of the Social Order," that appeared in the May *Atlantic Monthly,* Francis Fukuyama dates the beginning of the decline to sometime in the late Victorian period when Western rationalism and traditional morality began to be questioned, at least among the intellectuals, by men like Friedrich Nietzsche, John Dewey, and Sigmund Freud, who in turn built upon the Enlightenment philosophers of a generation or so earlier. Social disruption clearly picked up speed after the Great War and in the flapper era of the 1920s, but slowed its pace during the years of the Great Depression, World War II, and the postwar 1950s. The indices of decline after 1960, rising crime rates, increasing distrust of all institutions, student rebellion, male violence, and sexual irresponsibility occurred almost everywhere in the world. Only Japan and Korea seemed to have been unaffected.

And although few ever read Nietzsche, his philosophy influenced not only Wagner's operas and music but Adolf Hitler's evil psyche, and has lingered, twisted and perhaps misunderstood, into our own time:

> I sat there waiting—waiting for nothing.
> Enjoying, beyond good and evil, ...
> He who must be a creator in good and evil—verily
> he must
> first be a destroyer, and break values into pieces.
> Thus the highest evil is part of the highest goodness. ...
> I teach you superman.
> Nietzsche, *Thus Spake Zarathustra*

It may not be so strange that the demand for medical care and its costs have followed the same steeply ascending curves beginning in the mid 1960s. While Fukuyama does not mention this, the narcissism and self-indulgent failure to assume responsibility for one's own life, along with unlimited expectations for everlasting youth, freedom

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ROBERT U. MASSEY, M.D., Professor Emeritus, Division of Humanistic Studies, Department of Community Medicine and Health Care, University of Connecticut School of Medicine, Farmington.

from pain, disease, and lowness of spirits, in short, the medicalization of society, seem to be all part of the Great Disruption.

Ours has been called the information age, the postindustrial age, the postmodern age; moral relativism is in, values are out, broken into pieces, beyond good and evil. The episodic immorality that has been at all times a special privilege of the privileged classes has poured down like Niagara into the solid middle-class and has become both public and even respectable. De Tocqueville wrote with great optimism about the American democracy. It will work, he said in effect, because the people have within them such a strong sense of right and wrong, a clear awareness of the Natural Law governing all, both rich and poor, a shared sense of righteous behavior, and no hesitancy about shunning or shaming anyone who strayed from the way. Natural Law is nonsense say the modern ethicists; even so, Fukuyama is tentatively optimistic:

> [S]ocial order, once disrupted, tends to get remade, and there are many indications that this is happening today. We can expect a new social order for a simple reason: human beings are *by nature* social creatures whose most basic drives and instincts lead them to create moral rules that bind them together into communities. They are also by nature rational. …

But later he writes:

> Just the opposite: the individualism, pluralism, and tolerance that are built into the formal institutions tend to encourage cultural diversity, and therefore have the potential to undermine moral values inherited from the past. And a dynamic, technologically innovative economy will by its very nature disrupt existing social relations.

Fukuyama believes we shall ultimately recover our social order, and we are eager to share his hope; society can't put up with this kind of thing for long and, like most biological systems, has remarkable recuperative powers. There have been Great Awakenings before, and we may be on our way to one now. But today's danger is greater; we have tremendous technological power, never possessed before, in the hands of only occasionally responsible individuals. Perhaps we should not rule out surrendering for a time, or reinterpreting, some of our cherished Constitutional rights, such as unlimited free speech, or frivolous academic freedom, or the right to own assault weapons, maybe even declaring more than a few areas of research unfundable or off limits.

Medicine is deeply involved in the disorder that comprises the Great Disruption, and it surely has a part to play in its mending. While we remain perplexed, unable to decide what is best to do next, even about our own managed-care disruption, we may, when we tire of thinking about it, take heart from a Lewis Thomas aphorism: "The great secret … is that most things get better by themselves. Most things, in fact, are better by morning."

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This Month's Reading in Review

TIMOTHY B. NORBECK

"The health-insurance industry, which invented the coverage that helped to finance the extraordinary level of sophisticated medical care that most Americans enjoy, by its inability to reform its preposterous bureaucracies and make user-friendly encounters part of its service, is engaged in a sure form of self-immolation. Americans who are accustomed to 24-hour Internet access, to detailed information on their pension accounts, credit-card balances, frequent flier awards, etc., cannot be expected to tolerate the abusive incompetence that characterizes so many insurance encounters."

Carl J. Schramm, Ph.D.
Chairman of Greenspring Advisors Inc. and
former President of the Health Insurance
Association of America (HIAA)
Wall Street Journal (17 March 1999)

"Aetna pays millions of dollars in advertising, and then they don't pay their bills. I pay my bills. You pay your bills. Why shouldn't they?"

A Philadelphia plastic surgeon's comments on why he filed a lawsuit against Aetna U.S. Healthcare, alleging that the insurer refused to pay for some pre-authorized procedures and delayed payments on other claims.
American Medical News (26 April 1999)

"If you like what the HMOs have done to our healthcare system, then you will love what the market will do to our public schools. And if you like what HMOs have done to our doctors, then you will love what the market will do to our teachers, transforming them into profit maximizers, something very different from educators."

Bob Chase, President, National Education Association, using the HMO analogy to denigrate the market competition approach to education.
Vital Speeches (15 May 1999)

That Should Do It: As the ultimate incentive to solve the Y2K millennium bug computer problem, China has ordered its airline executives to take a flight on 1 January 2000.... "All the heads of the airlines have got to be in the air on 1 January 2000," said the director in charge of dealing with the problem at the Chinese ministry of information industries.

London Financial Times (May 1999)

When asked to rate 11 high-profile industries based on service to consumers, American adults rank the health insurance, managed care and tobacco industries at the very bottom.... Managed care fell 17% from two years ago to a 34% good and 55% bad rating ... Health insurance companies plunged 14% from 1997 to a 41% good and 53% bad rating ...

A companion question asked people whether they would trust a company in each industry to do the right thing "if they had a serious safety problem with one of their products or services." ... Health insurance companies scored 47% and managed care 37%.... Hospitals received the highest score at 70% positive.... Physicians were not part of the poll.

Harris Poll Release (27 April 1999)

The Internal Revenue Service recently acknowledged that tens of thousands of federal employees didn't bother to file or pay their taxes in 1997.... Incredible as it may sound, nearly 2.5% of the people at the Treasury Department (which includes the IRS) failed to pay their 1997 levies.

Forbes (17 May 1999)

Studies continue to show that employees often have little choice in selecting what managed care coverage they received.... A 1998 survey of 21,000 employers conducted by the RAND Corporation and the Research Triangle Institute found that only 17% of workers employed by private companies were offered a choice among plans ... Only one-third of the businesses with 100 or more employees allowed workers to select from a variety of plans.... The survey also found that only one-quarter of the large businesses gave employees anything beyond basic plan descriptions.

CQ Outlook (1 May 1999)

Not Only in America: A man who tripped over a curb near the social club where he had been drinking was awarded £500,000 at the Court of Session in Edinburgh.... After tripping, the man fell into the street and into the path of a van, suffering several fractures.... The judge ruled that the "roads authority," in designing the curb, should have foreseen that "pedestrians might be under the influence of drink." Later the award was reduced to £250,000.

London Times (19 March 1999)

TIMOTHY B. NORBECK, Executive Director, Connecticut State Medical Society.

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Notice of Declaratory Ruling—For Legal Publication June 15, 1999

Pursuant to 19a-613 C.G.S, the Office of Health Care Access (OHCA) is charged with, *inter alia*, the responsibility to "oversee and coordinate health system planning for the state." To this end, it is essential for the agency to appropriately interpret the terms embodied in the state's Certificate of Need law (19a-630 C.G.S. *et seq*). While the statute defines "health care facility," to include "free standing outpatient surgical facilities," among other things, it offers no guidance in defining "free standing outpatient surgical facilities." Historically, this term has been interpreted to include only those individuals or entities seeking licensure from the State of Connecticut as "outpatient surgical centers." Improved analgesics and the development of microsurgical techniques combined with cost containment pressures have given rise to new modalities of delivering health care. As the development of these new methods of delivering health care treatment occurs, so also must a reexamination of terms used to describe the modality of care take place. This Notice, pursuant to 4-176 C.G.S., seeks such a reexamination and interpretation concerning the "applicability to specified circumstances of a provision of the general statutes."

Statement of Question.—The Declaratory Ruling process is intended to provide OHCA guidance in interpreting, and will result in an interpretation of, "free standing outpatient surgical facilities" as used in 19a-630 C.G.S. The question to be determined is:

> If a licensed physician performs invasive surgical procedures with the use of anesthesia in his or her office, does such an office become a "free standing outpatient surgical facility" as used in 19a-630 of the Connecticut General Statutes?

Procedure.—The Office of Health Care Access has prepared the above and foregoing "Notice of Declaratory Ruling" in accordance with Connecticut Regulation 19a-643-24. Pursuant to that regulation, OHCA declares the following:

1. All persons or entities seeking Party, Intervenor, or Informal Participant status must Petition the Office of Health Care Access within 45 calendar days from the date of publication of this "Notice" (June 15, 1999).

2. All such Petitions referenced in paragraph #1 above must conform to the requirements of Connecticut Regulations 19a-643-37 (Party), 19a-643-38 (Intervenor) or 19a-643-39 (Informal Participant).

3. Hearings will be conducted during the weeks of August 9, 1999 and August 16, 1999. Additional information regarding specific date, time and location of said hearings will be provided in accordance with all applicable statutes and regulations.

4. This matter shall be conducted in accordance with the terms and conditions set forth in the Uniform Administrative Procedures Act, 4-176 *et seq* of the Connecticut General Statutes.

Qualidigm Evaluates Medicaid Managed Care Health Plan Performance

In 1995, the Health Care Financing Administration (HCFA) granted the State of Connecticut a waiver to transition Medicaid recipients from fee-for-service health care into a capitated managed-care system. The Connecticut Department of Social Services (DSS), responsible for those recipients, created a managed-care program intended to reduce costs without significantly reducing Medicaid recipient access to quality health-care services. As part of this waiver agreement, states must contract with a peer review, or peer review-like, organization to provide an independent, external review of the program. In Connecticut, Qualidigm provides this service under contract to the Department of Social Services (see inset for a description of other external review characteristics).

As part of the External Quality Review contract, Qualidigm developed an audit to examine day-to-day operational practices and contract compliance of the health plans participating in Medicaid Managed Care. The initial audits, conducted in 1997 and 1998, were intended to determine whether plan infrastructures were adequate to support delivery of all Medicaid covered services to enrollees. Baseline data were collected to compare program-wide performance, as well as plan-by-plan performance, and to establish program standards for future measurement.

A unique feature of Qualidigm's contract compliance audit is the objectivity built into the audit design. Frequently, audits consist of industry experts evaluating organizations on the basis of their own experience, without using objective measurement criteria and structured scoring mechanisms. Qualidigm spent several months developing a measurement tool intended to eliminate this subjectivity. Measurement criteria from documented sources were prioritized and organized into eight categories of key Medicaid health plan function: subcontractor oversight, access/availability, prevention/health promotion/education, member services, quality management, medical records, credentialing, and utilization management. The criteria were created with input from DSS staff, health plan principals, consumers, and clinicians,

Qualidigm serves as the External Quality Review Organization (EQRO) for the State of Connecticut's Medicaid Managed-Care Program. This contract includes responsibility for oversight of the quality of health-care services provided under this program.

Activities include:
- Individual Patient Care Studies
- Contract Compliance Audits (discussed further in this article)
- Individual Case Review
- Construction and Maintenance of an encounter database
- Validation of encounter and HEDIS Data

A computerized system was devised for the auditor to record plan scores and to tabulate audit results automatically at the end of the two-day on-site audit. Both aggregate and plan-specific results were reported to the DSS, the health plans, and the Medicaid Managed-Care Council, a legislative group mandated to provide oversight to the Medicaid Managed-Care program in Connecticut.

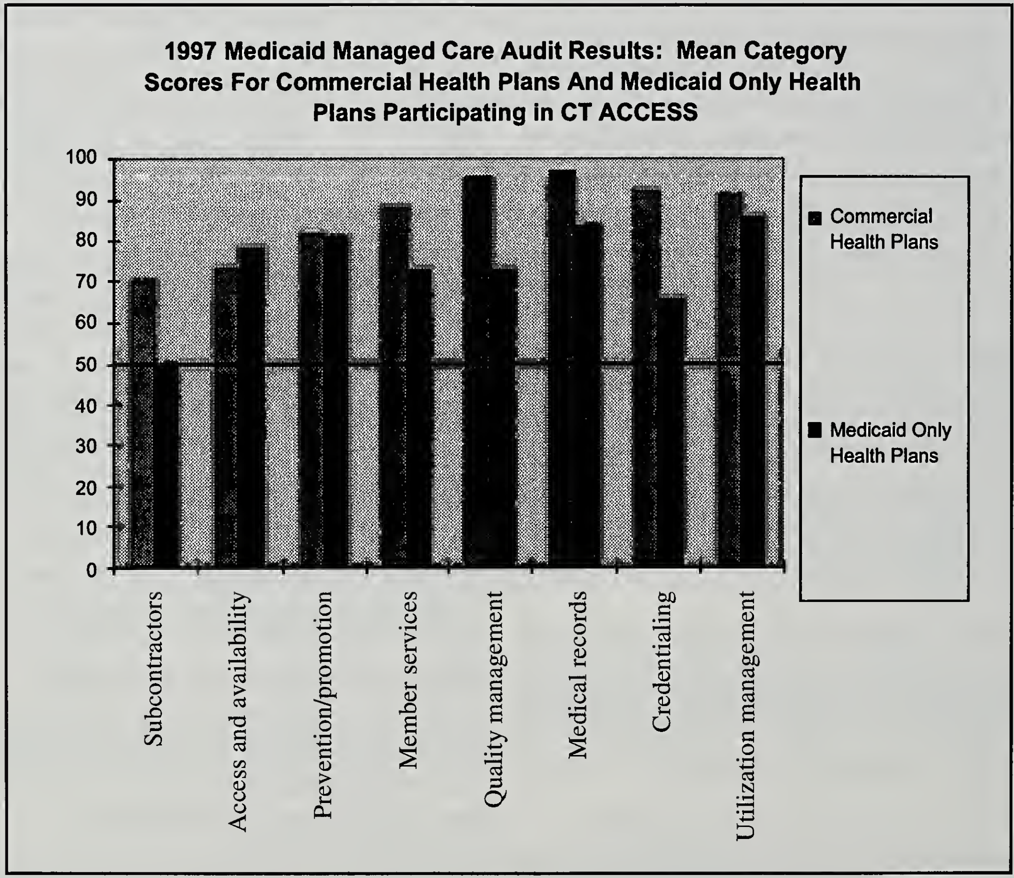
Audit findings showed that health plan structure was a major determinant of operational strengths and weaknesses. Commercial plans (plans with lines of business in addition to Medicaid) scored higher in categories measuring core capacity—member services, quality management, medical records, credentialing, and utilization management, but scored lower in prevention/education and access and availability. Those health plans newly created to participate solely in the Medicaid Managed-Care initiative scored higher in categories containing criteria related to special services exclusive to Medicaid enrollees. Such services include EPSDT screening and certain state and federally-mandated access and availability standards.

These are reasonable audit findings for health plans operating in a new Medicaid Managed-Care environment. Commercial plans have built and strengthened core functions through years of business, while the new Medicaid-only plans will require several years to reach their full economic and programmatic potential. However, the Medicaid-only plans, because of their community-based structures, have extensive experience with underserved populations. This experience gives them a unique perspective on Medicaid recipients and their medical and social needs, adding a dimension of understanding to their work that the commercial plans will acquire only through added experience with the Medicaid population. As the following graph shows, neither the commercial health plans nor the Medicaid-only health plans scored high in oversight of their subcontracted service providers such as pharmacy, vision, and behavioral health, although the commercial plans scored higher.

Qualidigm's second phase of contract compliance audits is scheduled to begin May 1999 and will be completed by the year's end. These audits build on the baseline data already collected and will focus on subcontractor oversight, member services, access, preventive services, and quality management, with an emphasis on utilization management operations and records. This time, there are fewer, but more rigorous, criteria to measure health plan performance. It will be more difficult to achieve an acceptable rating, which will require higher scores.

The performance bar will continue to be raised with each health plan audit cycle, and the importance and value of Qualidigm's external quality review will be central in the process. This repetitive process increases performance expectations and continually communicates the quality and operational integrity of Connecticut's Medicaid Managed-Care program to government entities, health plans, program advocates, and consumers.

Judie Bell, M.P.H.
Operations Specialist, Medicaid Managed Care
Barbara Casey, M.P.H.
Director of Medicaid Managed Care
Barry Waite, M.S.
Director of Communications



1997 Medicaid Managed Care Audit Results: Mean Category Scores For Commercial Health Plans And Medicaid Only Health Plans Participating in CT ACCESS

Letters to the Editor

Letters to the Editor are considered for publication (subject to editing and abridgement), provided that they are submitted in duplicate, signed by all authors, typewritten in double spacing, and do not exceed 1-1/2 pages of text (excluding references). They should not duplicate similar material being submitted or published elsewhere. Letters referring to a recent Journal article should be received within six weeks of the article's publication.

Endless Invention was Delightful

Letter to Dr. Massey: Your contribution to Reflections on Medicine as described in *Endless Invention* was delightful. The suggestion of "not too much history" by one faculty member reflects the thinking of the present generation but also recalls how often the older physicians regaled me with tales of their medical adventures of the past. Their attempts to clean out mastoid infections with the hammer and chisel, or cure cancer by destructive operations were often vividly described although often the end result was a failure. These same physicians helped pioneer many innovative approaches which led to advancing the improvement of care by those who succeeded them and we owe them a debt of gratitude.

With the rapid changes that took place in ear, nose and throat I took pride in seeking out the newest medical and surgical developments but also registering a certain amount of caution before making a decision. At times I fell into the same error of judgement experienced by others but quickly changed my direction.

Last month I was invited to speak to the Retirees of Saint Francis Hospital at their Annual Spring Reunion. This was a mixed group of nurses, technicians, aides and other employees along with a few physicians. Many had lived through the experience of no antibiotics, technical changes in the performance of so many surgical procedures but also the cooling atmosphere in the care of the patient. I was gratified by their appreciation of what had been accomplished during the 40 years that I practiced.

I will be returning north for the summer in another week and look forward to attending some of the sessions on the History of Medicine at the Health Center.

College and Medical School reunions (65th and 60th) make May a busy month but hopefully there will be some meetings at the Health Center later in the summer. I have asked to be put on the mailing list for lectures.

Best wishes to you. My thoughts and prayers are especially directed to Mrs. Massey.

Timothy L. Curran, M.D.
Stuart, Florida

What's Missing in Our Meetings?

As physicians we often take on the role of "medical citizens"[1] when we sit with our peers on various committees and boards. The knowledge and experience we bring to these meetings is extraordinary, but harnessing it into effective group action can be very difficult. Our convictions, our desires to sway others to our way of thinking and our prejudices often undermine our discussions. Ironically, the very independence that we pride ourselves on as individuals undermines our ability to work together as a group.

The time is right to acknowledge this problem and solve it. The challenges of managed care make it more important than ever before that physicians work together and reach consigns. Our frequent inability to do so redoubles the insurance industry's efforts to shape medicine along their market-driven blueprint.

High-powered corporations often hire consultants to teach them how to run their meetings and how to reach consensus. Doctors are sometimes reluctant, however, to hire such consultants, considering it a waste of time and money.

However, applying the basics of parliamentary procedure (rules of order) to their meetings can help physicians reach consensus and improve the quality of their decision-making. The cost is nothing but the price of a good book which describes the process simply. Unfortunately many doctors have the belief that rules of order inhibit discussion rather than facilitate it.

But the truth is that rules of order can be as simple or as complex as the situation calls for. What is important is that common sense, fairness, and logic are maintained--they are the foundation of any system of "procedure." Adhering to a few basic rules makes meetings flow more smoothly, protects the rights of everyone to participate and prevents anyone from dominating the discussion. The cooperation and harmony that are necessary for effective group action cannot take place without these basic elements.

Alice Sturgis's book The Standard Code of Parliamentary Procedure[2] is a simple and good reference. It is used by the Connecticut State Medical Society. I have borrowed from it heavily for this "primer" on rules and orders.

So here are some basics that everyone should know. Motions are the blood supply of parliamentary procedure. Without motions there would be no reason for rules of order. There are many different types but these are the essential ones: 1) the main motion, 2) a motion to table, 3) a motion to second, 4), a motion to resume consideration. 5) a motion to rescind, and 6) a motion to reconsider.

The main motion is simply a way to bring a proposal before a group for discussion and decision. It should be concise and clear eg, " I move that the CSMS serve filet mignon at its next House of Delegates meeting."

If a motion has been proposed it has to be seconded to qualify for discussion. When a person seconds a motion he or she does not necessarily have to agree with the motion. Seconding it only means that you want to hear more about it.

Tabling a motion means that further discussion is being postponed temporarily. A tabled motion can be brought back for discussion at the same meeting after more knowledge is obtained or people have thought about it more. This motion is often misused to prevent further discussion on a topic. When this happens the person chairing the meeting should ask for a 2/3 vote instead of a simple majority vote.

Bringing a tabled motion back for discussion is done by a motion to resume consideration. If my motion for filet mignon was tabled, I could bring it back for discussion by saying "I move to resume consideration of the motion to have filet mignon at the next House of Delegates meeting that was tabled earlier."

If you want to cancel a motion passed at a previous meeting you make a motion to rescind eg, "I move to rescind the motion passed at the last meeting that opposed the serving of filet mignon at the next house of delegates meeting."

A motion to reconsider is made to set aside a vote taken at a meeting and consider it again as if no vote were taken on it eg, " I move to reconsider the vote passed earlier that was in favor of serving filet mignon at the next House of Delegates meeting."

At the risk of oversimplification these are the essentials of motion-making that any physician attending a county or state medical meeting, or any other important meeting where policy changes are being proposed, should be conversant with. There are several other types of motions but they are not as important.

So much for those of us who become committee members. But how about those physicians who take on the responsibilities of chairing committees? Many do so without any training and waste valuable time "learning on the job. Any physician who has ever chaired a committee of his or her peers knows how difficult it is to keep the discussion focused and orderly. As a professional group we are articulate, intelligent,—and opinionated. Add to that our sense of individualism and it is clear why we ourselves admit that getting doctors to agree is like getting turkeys to line up and goose-step. So for those physicians who feel beset by the challenges of chairing, I offer the following suggestions . Here too I have borrowed heavily from Sturgis's book.

Start off a meeting by acknowledging that everyone has strong opinions about the issues on the agenda but if those opinions are going to be translated into meaningful discussion, a few rules of order need to observed. Then proceed to tell the committee members, 1) to please raise their hands and wait to be recognized before speaking, 2) that when a member is speaking please refrain from whispering around the table. It is distracting to the person who is trying to put his or her thoughts into words and to those members who are trying to listen, 3) to make comments concise and clear, 4) someone who has not spoken has priority to speak over someone who already has, and, 5) discussion should not take place across the table; it encourages everyone to "jump in" and start talking. For that reason comments should be directed to the chairperson.

If medicine is to regain its professionalism physicians need to take their roles as citizens of medicine more seriously. Using rules of order in our meetings is one small but very effective tool that can help us.

REFERENCES

1. Sullivan WM: What is left of professionalism after managed care? *The Hastings Center Report* March-April 1999; 29:7–13.
2. Sturgis A: *The Standard Code of Parliamentary Procedure 1988.* New York:McGraw Hill; 1988.

Edward J. Volpintesta M.D.
Bethel

From the Executive Director's Office

Council Meeting

Thurdsay, 25 March 1999

Attendance

In addition to the Chair, Dr. Hollister, were: Drs. Ahamed, Bigos, Bobruff, Conant, C. Czarsty, Deren, Eslami, Franklin, Geary, Herzog, Katz, Keating, Lesnik, Maloney, Sadowski, Timmerman, Turner, Van Linda, and Wetstone.

Also present were: Mr. Norbeck, Ms. Lindquist, Mr. Brunell, Ms. Morelli, Mr. Staples, Ms. Norbeck, Ms. Schaffman (all CSMS staff), Mr. Conway (FCMS staff), Mr. Fiorentino (HCMA and NHCMA staff), Dr. Genel (CURE), Dr. Thompson, and Mr. Lalime (CSMS-IPA).

Absent were: Drs. Aleali, Beck, Brooks, Carolan, J. Czarsty, Geist, Handelman, Montegut, Narayanan, Redmond, Sachs, Scarpa, Schwartz, Sindwani, Sosa, and Tesoro.

Reports of Related Organizations

CSMS-IPA: Dr. David Thompson, President of the CSMS-IPA, submitted a written report which was distributed with the agenda for the meeting. The report outlined the goals of the IPA which have been met; it described the infrastructure, which now has a staff of five. It was noted that nonphysician contracts are being closely scrutinized and are expected to add to physicians withhold return.

Mr. Ken Lalime, Executive Director of the CSMS-IPA, reported that as of 1 February 1999, the CSMS-IPA did sign an agreement with the Physicians Health Services (PHS). The IPA continues to be the exclusive delivery system for all the products under PHS-MD. He reported that he and Dr. Thompson met with county presidents and shared some of the details of that arrangement. The basics are that global capitation has been increased and there are some additional opportunities for shared risk with corridors of upside and downside possibilities. Mr. Lalime informed the Council in detail relative to the financial status of the IPA at the present time. There is a considerable debt. In the agreement PHS does fund 50% of the IPA budget in 1999. There are many aspects of the contract that are being shared with the Board and the IPA membership through written communications. The fee schedule hasn't changed, and some medical management programs are being put in place to manage utilization issues. It is believed that the capitation received will make it possible for the IPA to return additional physician withhold. The IPA is also working on a new State of Connecticut employee contract that should be more advantageous to the IPA members.

It was noted that PHS has hired 30 new employees to respond to telephone issues. A retreat was held with senior PHS management to go through the responsibility list as to who was going to do what, by when, and how to accomplish these goals. The IPA will endeavor to be sure that PHS does carry out its responsibilities. A utilization management committee has been formed to handle code review and patterns programs, and quality committees will be looking at disease management programs. The year 1999 should be a turn-around-year for the IPA.

Report of Connecticut Medical Insurance Company (CMIC)

In accordance with Council action, prior to each meeting of the House of Delegates there will be a report on CMIC.

Dr. Sultan Ahamed, President and Chairman of the CMIC Board, submitted a written report. The highlights of the report were as follows:

Membership nears 3,500.

Retention rate is over 95%.

Rates remain unchanged for 1999 policy year.

Declaration of a $6 million policyholders' dividend was the largest and eighth consecutive dividend.

A.M. Best reaffirmed "Excellent" rating.

New coverage was introduced at no additional charge: Legal Expenses for Medicare/Medicaid billing errors.

It was VOTED to receive the report as information.

Report of the President

Dr. Czarsty reported that the main things that have been going on since the last Council meeting have been legislative issues, and that Dr. Parke or Mag Morelli would be reporting on what is going on in the legislature. He stated that he was astounded at the response received on his President's Page on collective bargaining which appeared in *Connecticut Medicine*. All of the responses seemed favorable to doing a study on the issue. It was reported to him that the full-time faculty at the University of Connecticut is within weeks of receiving a ruling from the NLRB allowing them to organize the faculty, and that the faculty is feeling abused by the administration and is in favor of organization. This issue is on the minds of members and whether or not it makes sense to organize remains to be seen, but at least CSMS can show its members that it is being talked about. (Note: AMA Attorney Helen Jameson, addressed the Council on collective bargaining later in the meeting.)

Dr. Czarsty discussed a member's suggestions that CSMS set up some kind of mechanism to peer review expert testimony, by setting up specialty panels to review the testimony that is given. Specialty sections could review the testimony given and make the report available on the Internet so that the defense bar can go to the CSMS web page, and if the witness is coming up in another trial they will have access to what was said about his opinion. Perhaps this proposal could be discussed with CMIC to determine whether it is worthwhile or possible.

It was reported that there are over 900 physicians who have sent in their application for AMAP and negotiations are going on with a large insurer, and if the outcome is favorable a larger number will be brought into AMAP.

It was reported that the number of physicians participating in M.D. PAC is still fairly anemic, but is better this year. A good deal of credit goes to Dr. Timmerman, Chair of M.D. PAC.

Dr. Czarsty alluded to an item on the agenda about a list of group practices the CHA has brought into membership for the purpose of discussing business issues.

On the issue of tobacco money due to come into the state Dr.Czarsty stated that if anyone asked CSMS what to do with it, we did not have any policy. Perhaps the Chair might put a small group together to bring forth some ideas. Dr. Bigos stated that CSMS, as part of a coalition, did have a position on this issue. It was suggested that Dr. Bigos meet with Mag Morelli and other committee members and report back to the next council meeting.

Report of the Executive Director

Mr. Norbeck reported on the following items:

It was reported that the Medicare situation is in a real turmoil. A Medicare commission was created in the 1977 Balanced Budget Act to give lawmakers political cover from some of the difficult long- term choices regarding the program. It was headed by Senator John Breaux of Louisiana. There was talk of a prescription drug package, moving eligibility from 65 to 67 like Social Security, a premium support plan where seniors got a package of health benefits with the government's costs capped at a certain amount, higher copays and deductible, Medigap reform, and others. The Democrats always do better than Republicans on the issue of Medicare, and they want to keep the issue alive for the year 2000. Therefore, the chances for real Medicare reform this year appear to range between slim and none.

There have been questions as to why AMA has not sponsored or endorsed an HMO reform bill yet. They are not going to this year, but are advancing a set of principles for patient protection. There are various reasons why they have chosen this strategy. For one thing, bills and amendments change legislation drastically, but the biggest reason is that last year the AMA signed on to the Democratic bill which infuriated the majority of Republicans and exacerbated an already difficult situation along with AMA's rapport with the Republicans.

The California 1975 Medical Injury Compensation Reform Act (MICRA) which was in response to skyrocketing malpractice insurance costs, was reported as being under heavy fire from lawyers and consumers. That 1975 reform resulted in a $250,000 cap on pain and suffering, restrictions on lawyers' contingency fees, periodic payments, and provision for evidence of collateral source payment to be presented. It stabilized the market and helped lower malpractice premiums considerably. It was previously reported to the Council that should Democrat Gray Davis win over Republican Dan Lundgren (son of an M.D.), as Governor, the trial lawyers would have a real ally in turning back MICRA. They are now talking about an $800,000 cap on pain and suffering, which has the potential of raising physicians' premiums by as much as 17%.

Republican Congressman Tom Campbell (California) unveiled his legislation in Washington, D.C. on 25 March entitled the "Quality Health Care Coalition Act of 1999" (HR 4277). This bill would level the playing field for physicians with respect to their dealings with managed care entities and would allow independent physicians to collectively bargain. This legislation should get extensive media coverage and focus attention on the obvious unfairness of the present system where HMOs and insurers are holding all the cards. It will be a very difficult battle to enact this legislation, but the Congressional debate that follows will give medicine exposure it has never enjoyed before on this important issue.

Resolutions Referred from House of Delegates 17 November 1999

Several resolutions were referred to the Council for study as follows:

(a) *Resolution: Diminish the Inadequacies of our Current Malpractice System*

Resolved, that CSMS Council shall study HMO liability, State Department of Public Health postclosure investigations, malpractice tort reform, and alternative dispute resolutions, and report back to the next House of Delegates Meeting.

This resolution was referred to CSMS legal counsel, Cam Staples, and he reported the matter was still under study because some of the issues are currently being debated in the legislature.

(b) *Promotion of Solidarity Among Physicians*

(c) *Specialty Society Representation in House of Delegates*

Neither of these resolutions was adopted, and the House voted to refer them to the Council for study and for engaging the specialties in greater collaboration, such as a period Council of Presidents. The Council appointed a subcommittee to study these resolutions. The subcommittee, consisting of Brian Van Linda, M.D., Chair, Gerald Schwartz, M.D., and Gregory Turner, M.D., filed a written report with an attachment containing policies of the AMA House of Delegates on the issues.

Item (b) The report indicated that promotion of solidarity among physicians is already being undertaken by various sources and no further action was recommended at this time.

Item (c) The report indicated that although CSMS does have 22 specialty sections, none have shown interest in separate HOD representation. Their main activity is in the area of CME. Most of the specialties are already represented on various committees and in the House of Delegates. The concept of a "Council of Presidents" may have merit for discussing specialty-related issues and it was recommended that such an exploratory meeting of presidents and presidents-elect and leaders of large specialty societies be planned.

It was VOTED to approve the recommendations of the subcommittee and the full report will be published in the House of Delegates Handbook.

Legislation

On 24 February 1999 the CSMS Legislative Chair mailed an urgent request to the Council for permission to use the proposed policy contained in the report "Recommendations of the CSMS Council's Task Force on Office Surgery." The response favored the use of the policy. Mag Morelli, CSMS Director of Government Affairs, reviewed the policy and the reason for the urgent request, ie, bills were currently before the legislature on the issue and the hearings were being held prior to the Council meeting. The policy recommendations were:

- Adopt established voluntary standards of accreditation for specific levels of office surgery.
- Accept licensure or certification by Department of Public Health if above accreditation can be granted "deemed" status.
- Oppose any certificate of need regulation.

The Committee on Legislation believed that the Council should act formally on the question so that it would be a matter of record. It was VOTED to confirm the response received by mail.

A comprehensive report (23 pages) prepared by Sullivan & LeShane providing an update on legislative activities related to the CSMS was distributed to the Council. Mag Morelli discussed the most important issues.

Ms. Morelli discussed a confidential memo she had distributed to members of the Council which included the draft language being negotiated with the Connecticut Nurses' Association concerning language in the APRN bill.

Another item discussed was the issue of collaborative drug therapy management legislation being proposed by the Connecticut Pharmacists Association. The Legislative Committee met on this issue and decided to recommend that CSMS not support the legislation at this time. Due to subsequent letters of support from member physicians, Dr. David Parke, Legislative Committee Chair, requested Dr. Michael Deren, Vice-Chair of the Council, to discuss the issue with physicians and pharmacists who were supportive of this legislation and report back to the Council for its reconsideration. Dr. Deren reported to the Council on his meeting and the Council voted to oppose the legislation at this time.

Items Referred by the Council on 20 January 1999 for Study

The question was raised about whether or not it is illegal for physicians to contract privately with patients that are on Medicare. Staff was requested to review the law and report back to the Council. CSMS legal counsel submitted an AMA summary of current Medicare private contracting provisions. Medicare law provides that physicians may contract privately subject to the following conditions: 1) The physician or practitioner must have an affidavit in effect at the time services are provided pursuant to the contract; 2) The affidavit must be in writing and signed by the physician or practitioner; and 3) The affidavit must provide that the physician or practitioner would not submit any Medicare claim for any item or service provided to a Medicare beneficiary (and will not receive any reimbursement for any such item or service) for a two-year period beginning on the date the affidavit is signed. The report was received as information.

Another issue was raised as to whether it was acceptable for a physician to promote unrelated business products to his patients and it was requested that CSMS legal counsel look into the issue to determine whether this practice was ethical. Cam Staples submitted a copy of a report excerpted from the report of the Council on Ethical and

Judicial Affairs of the AMA in December 1997. Essentially the report states that except for situations where nonhealth-related products are sold from a physician's office for the benefit of community organizations, it is unethical to sell nonhealth-related products out of a physician's office. The report was received as information.

CSMS legal counsel was also requested to look into alternative malpractice dispute resolution mechanisms. He reported that he looked into the status of arbitration and found that it is not generally followed around the country and has not been seen as a successful model. Arbitration usually allows for a case to go to trial, so it is seen as a lengthening process, and the jury trial option is always there. In some cases, it has been used by plaintiff's attorneys to have a dry run of their case and consequently defense counsel typically chooses not to take advantage of it. In those states that have made it binding, parties have to voluntarily choose to waive their right to a trial, and that is not happening very often. Overall, arbitration has not been a successful alternative dispute resolution model. He reported that he was looking into new developments in the mediation area which are occurring between the AMA and some national experts at the Harvard School of Public Health and Harvard Law School mediation project. He will report back when more information is available. The report was received as information.

Connecticut Medical Insurance Company Nominations

A communication from CMIC informing CSMS of the CMICs nominations to their Board of Directors was received as information. The names submitted were: Sally Crawford, M.D., Mehdi Eslami, M.D., Dickerman Hollister, Jr., M.D., David Kalayjian, M.D., Joseph Sadowski, M.D., Theodore Zanker, M.D., and Francis Van Nostrand, M.D.

Collective Bargaining

Helen Jameson, Division Counsel, American Medical Association Private Sector Advocacy, joined the Council and reported on the subject of collective bargaining and its present status. She reported that there is a lot of confusion and misunderstanding about the issue of collective bargaining. She referred to Republican Congressman Tom Campbell's (California) legislation entitled the "Quality Health Care Coalition Act of 1999, (HR4277)" that would allow independent physicians to collectively bargain. She stated that state societies should make every effort to support this legislation. It was stressed that collective bargaining is contingent upon an employment relationship, and as long as there is an employment relationship, nonsupervisory employees in any industry can organize into collective bargaining units and negotiate the terms and conditions of their employment. Therefore, employment being the key to collective bargaining, there is no such thing as collective bargaining within the constraints of the antitrust laws for anyone but employees of any industry. Two resolutions on the subject will be brought up at the June 1999 AMA meeting. The latest word is that a reference committee will discuss this issue, and it will be focussed to make sure that it is clear that the will of the House of Delegates is to form this type of collective bargaining agency, which will be available to a limited group of employed physicians to level the playing field. The concern is that something may be created that will result in disappointment among other physicians who will not be eligible to organize because of the law.

It was VOTED to publicize the number of the Campbell bill and urge physicians to contact their legislators asking their support.

It was further VOTED for CSMS to attempt to obtain information on the number of employed physicians in the State of Connecticut.

Physician Practice Managers of Connecticut-Based Group Practices

A member of the Council brought this item to the attention of the Council. The memorandum stated that in response to the needs identified by growing physician practices in Connecticut, the Connecticut Hospital Association has been offering services to physician groups under its Type VI membership category. Currently, 44 practices have taken advantage of CHA's membership. It was suggested that M.D. Advantage and AMAP could probably provide the same services and it was stated that most of these groups have already been contacted informing them of the services available through M.D. Advantage and AMAP.

CSMS Distinguished Citizen Award

A communication was received from the Committee on Public Affairs recommending the nomination of Sister Mary Anne Powers, former Director/Principal of the Children's Community School in Waterbury, for the 1999 CSMS Distinguished Citizen Award. It was VOTED to approve the nomination of the committee.

Appointment of Minority State Coordinator

A communication was received from the AMA requesting state medical associations to appoint an AMA member physician to serve as a Minority State Coordinator. The AMA Minority Affairs Consortium was established to provide a forum for identifying and addressing important minority health issues and the professional concerns of minority physicians. The Consortium is working to strengthen the voice of minority physicians in AMA/federation policy and program development.

It was VOTED to nominate Juan B. Sosa, M.D., of Middletown, to this post.

Ahamed Family Foundation

Dr. Hollister announced that Dr. Ahamed is donating $500 from the Ahamed Family Foundation to CSMS to cover the cost of the two $250 prizes to the winners of the Connecticut Science Fair Awards to be presented at the House of Delegates meeting on May 12.

M.D.PAC

Dr. Timmerman, Chair, reported on the membership in M.D. PAC and informed the Council that the percentages of participation in the various categories, ie, Council, AMA Delegation, CSMS Delegates, and Alternates, were disappointing. He stressed the need for cooperation from the membership in this important area.

Dates of Future Meetings

Council Meeting—Wednesday, 30 June 1999

Semi-Annual Meeting—House of Delegates, Wednesday, 17 November 1999

CALL FOR PAPERS

Members of the Connecticut State Medical Society reading papers before other organizations are invited to submit their papers to the *Journal* for consideration. Authors preparing manuscripts for submission to *Connecticut Medicine* should consult **Information for Authors**. This is published in most issues of *Connecticut Medicine* or may be obtained from the *Journal* office. Adherence to the instructions will prevent delays both in acceptance and in publication.

Papers prepared on a word processor should be submitted on a diskette along with the hard copy.

Please send them to:

H. David Crombie, M.D., Editor
Connecticut Medicine
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New Haven, CT 06511

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Connecticut State Medical Society

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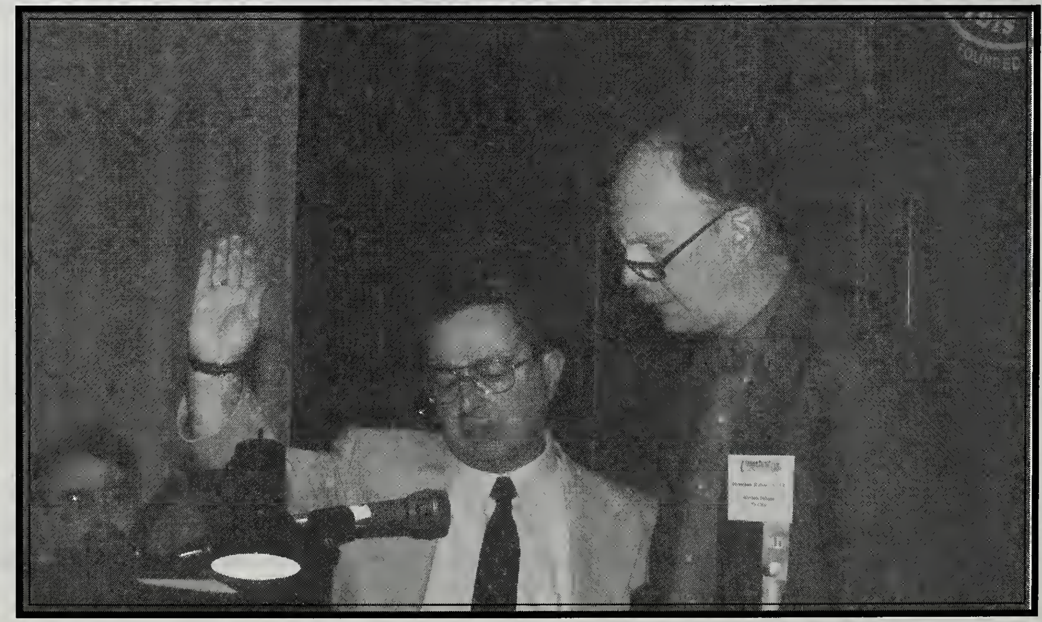
Craig W. Czarsty, M.D., giving his report as retiring president.

Dickerman Hollister, Jr., M.D. presenting the past president's pin to Craig W. Czarsty, M.D.



Dickerman Hollister, Jr., M.D., administering the oath of office of the president to Stephen R. Katz, M.D.

SUMMARY OF PROCEEDINGS
CSMS HOUSE OF DELEGATES—ANNUAL MEETING
RAMADA INN, MERIDEN—12 MAY 1999

Reports and Addresses

The House received reports, addresses and/or remarks from the incoming President and the retiring President, Secretary, Treasurer, the Chair of the Council, Delegates to the AMA, Chair of the Board of Directors of M.D.PAC, the CSMS Executive Director, CSMS-IPA, Connecticut Medical Insurance Company (CMIC), and M.D. Advantage, Standing Committees, Representatives and Advisors, and Delegates from the Massachusetts Medical Society, New Hampshire Medical Society, Medical Society of New Jersey and the Medical Society of the State of New York. Most of the reports and resolutions were published in the Handbook that was distributed to the delegates. The addresses of the Executive Director, Tim Norbeck, and the retiring President, Craig W. Czarsty, M.D. appear elsewhere in this issue of *Connecticut Medicine*. The inaugural address of the new President, Stephen R. Katz, M.D., appears as the President's Page in this issue.

Dr. J. Edward Hill, a member of the AMA Board of Trustees, Chair for the Board's Committee on Membership, member of its Finance Committee and President of the AMA Foundation, addressed the House.

PRINCIPAL ACTIONS TAKEN

Election of Officers and Others

The House voted to approve the published report of the Nominating Committee (the Council). Officers elected were:

President: Stephen R. Katz, M.D., Fairfield
President-Elect: Donald T. Timmerman, M.D., Glastonbury
Vice-President: Alfred Herzog, M.D., Hartford
Secretary: Brian M. Van Linda, M.D., Avon
Treasurer: Roger S. Beck, M.D., Wethersfield
Speaker of the House of Delegates:
Howard J. Wetstone, M.D., Bloomfield
Vice-Speaker of the House of Delegates:
John P. Bigos, M.D., New London
Councilor-at-Large:
Craig W. Czarsty, M.D., Oakville

Delegates and Alternates to the American Medical Association:

Anthony P. Redmond, M.D., Greenwich (D)
1/1/00–12/31/01
Ferdinand J. Montegut, Jr., M.D., Shelton (A)
1/1/00–12/31/01
Neil J. Brooks, M.D., Rockville (D)
1/1/00–12/31/01
Sultan Ahamed, M.D., Norwich (A)
1/1/00–12/31/01
Francis J. Scarpa, M.D., Greenwich (D)
1/1/99–12/31/00
Michael M. Deren, M.D., New London, (A)
1/1/00–12/31/00
Joseph S. Sadowski, M.D., Hartford (D)
1/1/99–12/31/00
Dickerman Hollister, Jr., M.D., Greenwich (A)
1/1/99–12/31/00
Mehdi S. Eslami, M.D., Waterbury (D)
1/1/99–12/31/00
John B. Franklin, M.D., Hartford (A)
1/1/99–12/31/00

In approving the report of the Nominating Committee, it was also voted to disband the Liaison Committee with the Connecticut Pharmacists Association.

Following are the actions taken on the business that came before the House:

OLD BUSINESS

At the 1998 semi-annual meeting, the following resolutions were referred to the Council by the House of Delegates for implementation: The report of the Chair of the Council, which was accepted by the House, included the following information:

RESOLUTION: "Diminish the Inadequacies of our Current Malpractice System"

This resolution was referred to CSMS legal counsel, who reported the matter was still under study because some of the issues are currently being debated in the legislature.

The following two resolutions were not adopted and the House voted to refer them to the Council for study and for engaging these specialties in greater collaboration, such as a periodic Council of Presidents. A Council subcommittee studied these resolutions, and reported as follows:

RESOLUTION: "Promotion of Solidarity among Physicians"—The report indicated that the promotion of solidarity among physicians is already being studied, and CSMS leaders participate annually with those from most other medical societies at the AMA leadership conference on current issues and the legislative and political mechanisms by which the organized profession addresses them at the state and national levels. CSMS is an active member of the so called "AMA Litigation Task Force," which funds medicine's participation in crucial suits and appeals, keeping CSMS on the cutting edge of developments in case law affecting the profession. As to a national plan, the AMA House of Delegates keeps abreast of this issue. No further action was recommended on this issue at this time.

RESOLUTION: "Specialty Society Representation in House of Delegates"—The report indicated that although CSMS does have 22 CSMS specialty sections, none has shown interest in separate HOD representation. Their main activity is in the area of CME. Most of the specialties are already represented on various committees and in the House of Delegates. The concept of a "Council of Presidents" may have merit for discussing specialty-related issues, and it was recommended that such an exploratory meeting of presidents and presidents-elect and leaders of large specialty societies be planned.

RESOLUTION: "Conflict of Interest." (Adopted by the House 19 November 1998) The House recommended that all persons nominated for positions as officers and committee chairs of CSMS shall disclose for publication in the handbook, prior to election, any and all business relationships with insurance and managed care entities, other than the usual "third party" practice relationships. Additionally, this information shall be published annually in *Connecticut Medicine* together with the same information for all members of CSMS Council as well as senior management.

This has been implemented and the information appears at the conclusion of this summary.

NEW BUSINESS

THE HOUSE VOTED TO APPROVE THE FOLLOWING RESOLUTIONS

RESOLUTION: Waiting Periods in Drug Formularies

Resolved, that the Connecticut State Medical Society seek legislation which would require managed care organizations to cover at least a 10-day supply of a nonformulary prescription drug while the physician is reviewing and/or appealing the HMO's decision to use a formulary drug.

RESOLUTION: Reduce HMO Administrative Burdens

Resolved, that the Connecticut State Medical Society make every effort to apprise the Legislature how HMO administrative demands lead to lower quality medical care; thus require that HMOs reduce these administrative demands.

RESOLUTION: Educate the Public About HMOs

Resolved, that the Connecticut State Medical Society redouble its efforts by charging the Committee on Public Affairs to address the issue of how to make the public more aware of the intricacies involved with HMO insurance coverage.

RESOLUTION: Recognition and Endorsement of Contract Bargaining Units by the American Medical Association.

Resolved, that the CSMS AMA Delegation urge the American Medical Association to strongly support physicians who choose to organize unions or professional bargaining units consistent with applicable current and future law so as to protect themselves and their patients against insurers; and be it further

Resolved, that the American Medical Association establish ethical guidelines to specifically deal with physician collective bargaining and unionization, be it further

Resolved, that organized efforts by physicians following those guidelines and abiding by the law be formally recognized and endorsed by the American Medical Association.

AWARDS

American Medical Foundation

The American Medical Foundation, which fosters excellence in education and research, each year presents checks to the two medical schools in Connecticut.

Dr. Czarsty presented the following awards:

University of Connecticut School of Medicine ... $9,097.50

Peter Deckers, M.D., Dean, accepted the check.

Yale University School of Medicine ... $7,387.50

Myron Genel, M.D., Associate Dean of Government and Community Affairs, accepted the check.

Connecticut Science Fair Awards

Dr. Czarsty announced the following awards which were sponsored by Sultan Ahamed, M.D., of Norwich:

First Place—*Senior Division*—Rowena Mittal
Project: "Antigen Ki-67 Expression in Chicken, Fish, and Plant Cells"

Second Place—*Senior Division*—Sameer Lapsia and Amy Shah
Project: "The Use of Natural Derivatives on LNCaP Cancer Cells"

First Place—*Junior Division*—Laura Klein
Project: "A Protozoan for the Hazards of Vitamin A Overdose"

Second Place—*Junior Division*—Alexandra Friedman and Julie Rappoport
Project: "The Effect of Capsaicins on Antimicrobial Activity of Various Herbs"

The first place winners received a plaque and a check. The second place winners received a plaque and a book.

1999 Distinguished Citizen Award

The award was given to Sister Mary Anne Powers, founder and former principal of the Community School in Waterbury. She directed and served the Community School for 14 years before her retirement last year. During her tenure, she assisted 220 at-risk students in achieving their high school diploma and was instrumental in developing and obtaining funding for a $500,000 endowment fund for the school, with the interest earned helping to pay the school's yearly operating expenses. Sister Mary Anne has served on various boards in Waterbury and received the Distinguished Service Award from the Waterbury Jaycees, and the Child Guidance Clinic honored her with the Outstanding Professional Accomplishment for Children. She was presented with a mantel clock to commemorate the 1999 Distinguished Citizen Award from the Society and a check for $500 for the Children's Community School.

Award to Retiring President

Dr. Dickerman Hollister, Jr., Chair of the Council, presented a Paul Revere silver bowl and past president's pin to Craig W. Czarsty, M.D.

Inauguration of New President

Dr. Dickerman Hollister, Jr., gave the Oath of Office to the new president, Dr. Stephen R. Katz, and presented him with a gavel and a presidential medallion inscribed with his name and date.

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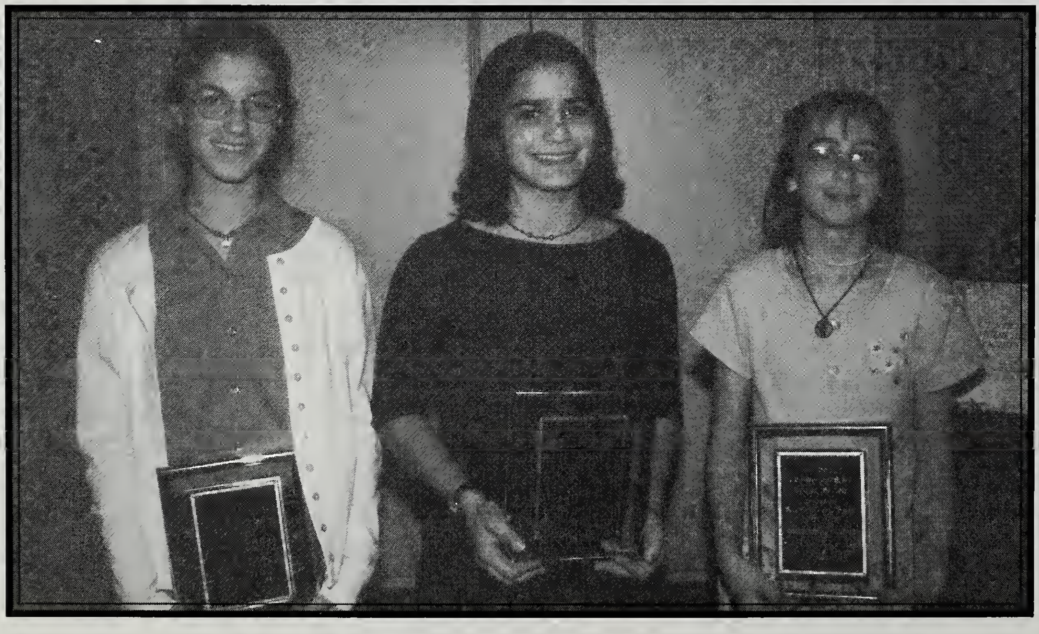
Stephen R. Katz, M.D., giving his inaugural address

The Distinguished Citizen Award was presented to Sister Mary Anne Powers (C), Craig W. Czarsty, M.D., (L) and John Conant, Jr., M.D. (R)



Science Fair Award winners (from L-R), Julie Rappaport, Laura Klein, and Alexandra Friedman.

Stephen R. Katz, M.D.
with his wife Evelyn.

J. Edward Hill, M.D.,
AMA Board of Trustees,
and Craig W. Czarsty,
M.D., Retiring President

J. Edward Hill, AMA
Board of Trustees, and
Joseph S. Sadowski, M.D.,
Chair of CSMS
AMA Delegation

UNIVERSITY OF MARYLAND, BALTIMORE

Resolution on Conflict of Interest

At the 19 November 1998 House of Delegates meeting, the following resolution was adopted:

"Resolved, All persons nominated for positions as officers and committee chairpersons of the Connecticut State Medical Society shall disclose for publication in the delegates handbook, prior to the election, any and all business relationships with insurance and managed care entities, other than the usual "third party" practice relationships.

Additionally, this information shall be published annually in Connecticut Medicine together with the same information for all members of the CSMS Council as well as senior managemen.."

Following is the list of the responses:

COUNCIL MEMBERS

Sultan Ahamed, M.D., Norwich—President and Chair of Board of CMIC.
Board Member, Colonial Cooperative Care
Board Member, Backus Hospital
Board Member, Physician Insurance Association of America Corporator, Dime Savings Bank, Norwich
Seyed H. Aleali, M.D., Bridgeport—Board Member, Physician Health Services
Roger S. Beck, M.D., Wethersfield—No affiliations
John Bigos, M.D., New London—No affiliations
Jerome Bobruff, M.D., New London—Board Member, Colonial IPA
Neil H. Brooks, M.D., Rockville—No affiliations
Patrick J. Carolan, M.D., Bridgeport—No affiliations
John K. Conant, Jr., M.D., Waterbury—No affiliations
Craig W. Czarsty, M.D., Oakville—Claims Committee, CMIC
Joseph C. Czarsty, M.D., Oakville—No affiliations
Michael M. Deren, M.D., New London—Board of Directors—CSMS-IPA Director—Colonial IPA Member—PHS Quality Assurance Committee
Mehdi S. Eslami, M.D., Waterbury—Board of Directors—CSMS-IPA Board Member-CMIC
John B. Franklin, M.D. Hartford—No affiliations
William J. Geary, M.D., Hartford—Board Member, Med Serv of Connecticut
Robert W. Geist, M.D. Middletown—No affiliations
William Handelman, M.D., Torrington—Board of Directors—CSMS-IPA Credentials Committee, CSMS-IPA Utilization Management Committee, CSMS-IPA
Alfred Herzog, M.D., Hartford—No affiliations
Dickerman Hollister, Jr., M.D. Greenwich—Board of Directors, CMIC
Stephen R. Katz, M.D., Fairfield—Board Member, CSMS-IPA
Stanley J. Keating, Jr., M.D., Simsbury—Board of Directors, CMIC
Thomas H. Lesnik, M.D., Norwich—No affiliations
Paul K. Maloney, Jr. M.D., Fairfield—No affiliations
Ferdinand J. Montegut, Jr., M.D., Shelton—No affiliations
Chandra N. Narayanan, M.D., East Hartford—No affiliations
Anthony P. Redmond, M.D., Greenwich—No affiliations
Frederick L. Sachs, M.D., New Haven—No affiliations
Joseph S. Sadowski, M.D., Hartford—Treasurer, CMIC
Francis J. Scarpa, M.D., Greenwich—Medical Policy Committee, Anthem Blue Cross Board of Directors, Oxford Health Plan
Gerald L. Schwartz, M.D., Vernon—Board of Directors, Pharmacy and Therapeutic Committee, PHS
Desh R. Sindwani, M.D., Stafford Springs—No affiliations
Juan B. Sosa, M.D., Middletown—Partner, Psychiatric Management, Inc. (PMI)
Michael R. Tesoro, M.D., Sharon—No affiliations
Donald D. Timmerman, M.D., Portland—No affiliations
Gregory T. Turner, M.D., Willimantic—No affiliations
Brian M. Van Linda, M.D., Avon, Board of Directors, CMIC—Board of Directors. Professional Liability Company of America (PLICA)
Howard J. Wetstone, M.D., Bloomfield—No affiliations,

COMMITTEE CHAIRS

Arthur F. Blake, M.D., Higganum—Stockholder, Middlesex Professional Services, IPA Stockholder, ProHealth Physicians, P.C.
H. David Crombie, M.D., Hartford—No affiliations
James F.X. Egan, M.D., Farmington—Medical Advisory Board, Women's Integrated Network
Vittorio Ferrerro, M.D., Essex—No affiliations
Karen A. Hutchinson, M.D., Bridgeport—No affiliations
Leslie B. Lindenberg, M.D., Avon—No affiliations
Ramon N. Kranwinkel, M.D., Danbury—No affiliations
James S. Kort, M.D., Vernon—No affiliations
Mark L. Kraus, M.D., Waterbury—No affiliations
John W. O'Brien, M.D., New Haven—Occasional Consultant, Anthem Blue Cross
David W. Parke, M.D., Wallingford—No affiliations
Alicia Perez, M.D., Danbury—No affiliations
Michael F. Saffir, M.D., Bethany—No affiliations
Lucius F. Sinks, M.D., Middletown—No affiliations
Constance T. Walker, M.D., West Hartford—No affiliations
Herbert E. Weisberg, M.D., Waterbury—No affiliations

SENIOR MANAGEMENT

Timothy B. Norbeck, New Haven—Board of Directors, Gaylord Hospital

Address of the Executive Director

CSMS Annual Meeting—House of Delegates

12 May 1998

TIMOTHY B. NORBECK

IN preparing for the National Antarctic Expedition 99 years ago, British explorer Sir Ernest Shackleton placed a brutally honest advertisement in the London newspapers.

> "Men wanted for hazardous journey," the ad read. Small wages, bitter cold, long months of complete darkness, constant danger, and safe return doubtful. Honor and recognition in case of success."
>
> What Sir Ernest couldn't understand was the response to his ad. As he later referred to that call for volunteers: "It seemed as though all the men in Great Britain were determined to accompany me, the response was so overwhelming."

But it really shouldn't have been that much of a surprise. "Honor or recognition in case of success." That's how driven people are to do something worthwhile, to be proud of oneself, to be respected, to be recognized, to feel important. It has always been that way.

It is something that is indigenous to your profession; in being a physician, in helping people, in feeling that you matter, in being looked up to, and in achieving something important. That is what you are. That is what you do. That is your everlasting mark on society. You are a physician. You worked hard to be a physician. You will *always* be a physician—even long after you have seen your last patient. But of course, your noble profession is under great siege today.

As you all know, the federal government has deputized our elderly to root out fraud and abuse in the Medicare program—and offering a 1,000 dollar bounty in return. To exacerbate this travesty, the AARP has assumed the role of handmaiden to this police-state initiative. The government estimates that improper Medicare payments amounted to 12.6 billion dollars last year. But get this; it admits that it can't specify how much was attributable to fraud, rather than to unintentional billing errors. And there's more. That 12.6 billion dollar figure was extrapolated from a review of claims that were filed by a mere 600 Medicare patients. Is there anyone other than a government official who can seriously believe that turning patients into adversaries will improve the quality of medicine?

Now I know what Jay Leno was talking about when he was commenting recently on a survey that showed that Americans work the first three hours of every day just to pay their taxes. Leno said: "So that's why we can't get anything done in the morning—we're all government workers!" That may also explain the IRS auditor's advice to the American public: "The trick," he says, "is to stop thinking of it as *your* money."

But government is far from being our only concern, of course. There have been 162 mergers in the health-care industry over the past 10 years. In the past four years, the 18 leading health insurers have combined into six. That has not been good for physicians or their patients. You and your colleagues nationally find yourselves at the negotiating table with enormous health plan bureaucracies who seem preoccupied with the bottom line.

Antitrust laws were put in place earlier in this century to prevent the "robber barons" from unreasonably exerting their industrial muscle to eliminate competition—not to prevent physicians from being able to compete fairly in today's unlevel and unfair managed-care marketplace. But that is how they are being interpreted.

ERISA was enacted in 1974 to protect the interests of employees and their dependents with regard to their pension and health plans—not to be a shield of immunity that protects managed-care organizations from potential liability for their negligent denial of health benefits. But that is how it is being interpreted.

"Medical necessity" was supposed to be determined by physicians, as it was before managed care—not redefined by some HMOs in terms of the least costly alternative to care. But that is what is happening.

> Every medical decision seems to be up for grabs by nonphysicians. For example, an American biologist who had been working in the Amazon jungle developed a very painful foot and returned home to have it examined. His physician told him that it was a very bad case of gangrene and that the foot would have to be amputated.

Thinking that native doctors might have an alternative treatment, the biologist returned to Brazil. There he met with a medicine man who told him his foot did not have to be amputated.

"Thank goodness," smiled the biologist, "those American doctors always want to operate."

"You're right," agreed the medicine man, "all you have to do is wait two weeks. The foot will fall off by itself."

That is the bad news. The good news is that while we may not get everything we want, we are making some gains. There is a cost for those gains, however.

Just as it was for Adam who was walking around the Garden of Eden one day feeling very lonely.

God asked him, "What's wrong with you?" Adam said he didn't have anyone to talk to.

God said that he was going to make Adam a companion and that it would be a woman. He said, "This person will gather food for you, cook for you, when you discover clothing, she'll wash it for you. She will always agree with every decision you make. She will bear your children and never ask you to get up in the middle of the night to take care of them. She will always be the first to admit she was wrong when you've had a disagreement. "

Adam asked God, "That sounds wonderful but what will it cost me?"

"Well, Adam," God replied, "it will cost you an arm and a leg."

Then Adam asked: "Well, God, what can I get for a rib?"

Through the AMA's good work, an increasing number of Members of Congress have come to appreciate how unfair and onerous the government's position on Medicare fraud and abuse has become.

HCFA must correct its own faulty database. It must educate physicians and Medicare patients instead of tormenting then. It must simplify the ridiculously vast number of rules and regulations. Do you know that the IRS regulations, long considered to be the most complex and confusing set of regulations ever set to paper, contain 14,000 pages? Would you believe that Medicare's regulations amount to 132,000 pages of text?—and they hold physicians accountable for every one of them. After the initial uproar, there are positive signs of HCFA's willingness to sit down with medicine and work out a plan that accomplishes what everyone wants—to root out real fraud and abuse—without undermining the necessary trust developed between Medicare patients and their physicians.

As for the terribly unjust interpretation of the antitrust laws—laws that seem to work against the very people they were supposed to help—there appears to be progress on that horizon as well.

AMA is working hard, with the help from CSMS and other state medical and specialty societies, to change that terrain. California Republican Congressman, Tom Campbell and Michigan Democratic Congressman, John Conyers recently introduced legislation that would allow for independent physicians to bargain collectively. Connecticut's Dr. Michael Connair has been active on that front and traveled to Washington to testify in favor of it.

It is necessary legislation—necessary in order to respond to the unfair practice of health insurers engaging in heavy-handed negotiation tactics and requiring exclusionary contractual commitments from physicians and other caregivers. Health insurance companies already benefit from special antitrust protection. The Campbell-Conyers legislation would level the playing field between MCOs and physicians. It would allow individual physicians to bargain collectively with health plans and be more effective patient-care advocates. The legislation is HR 1304, and is called, "The Quality Health-Care Coalition Act of 1999." Congressional hearings in Washington will be held later this month, and we finally will have a fair and public hearing on this most vital issue. The resulting exposure will be unprecedented.

Pay back can be sweet.

There is a story about some U.S. soldiers in Korea who employed a Korean houseboy in their apartment. They kept playing terrible and insensitive pranks on him. They nailed his shoes to the floor, smeared grease on the doorknobs, and even put a bucket of water over the door so that when he came in he got doused. The houseboy never seemed to let it bother him and he never retaliated.

Eventually, they felt guilty and apologized to him for all their transgressions. He seemed surprised.

"You mean no more shoes nailed to floor?" he asked.

"No, we're not going to do that again."

"No more grease on doorknob?"

"No, we won't do that anymore."

"No more water over door?"

"No, no more of that, either."

"Okay," the houseboy said, "No more peeing in soup."

There's good news on the ERISA front, too. A Texas case, Texas legislation, and the Droney decision in Connecticut are all very positive signs that justice is on the way. And the myth—that holding HMOs responsible in the courts will result in too many lawsuits and cost too much in premium increases—has also been punctured.

Coopers and Lybrand performed a study recently based on the experiences of public programs in both California and Colorado—which have long given enrollees that right—and it documents that the right to sue will cost no more than pennies per member per month. Furthermore, it is a fact that in Texas, where a state law enacted in May of 1997 allows patients to sue HMOs, the first and only suit filed so far was on 19 October 1998—some 17 months later.

Fighting accountability and user friendliness will not help the HMO industry. A few weeks ago, I noticed a compelling letter to the editor of *The Wall Street Journal.*

The writer complained that the "health-insurance industry, by its inability to reform its preposterous bureaucracy and make user-friendly encounters part of its service, is engaged in a sure form of self-immolation." What makes that statement particularly noteworthy is who said it. It was said by none other than Carl Schramm, the former President of the HIAA (Health Insurance Association of America), the biggest advocate for HMOs in the country.

Mr. Schramm went on to say that "Americans who are accustomed to 24-hour Internet access, to detailed information on their pension accounts, credit-card balances, frequent flier awards, etc., cannot be expected to tolerate the abusive incompetence that characterizes so many insurance encounters." That is another reason why we are going to win this accountability struggle with the insurers—when their own people speak out with such candor.

As pointed out to us by a medical student who was an analyst for the Wall Street firm Alex Brown & Sons, it is interesting to note that investment bankers at Alex Brown made millions on the initial public offering of U.S. HealthCare, but not a single one of them selected that HMO when it came time to choose their own health plan. Could it be that after taking the company public, the bankers had learned too much about the HMOs hard-nosed and aggressive tactics to entrust it with their own families' health care?

To truly get where we want to be, however, all physicians will have to commit themselves to more than a passing interest in the political process. I don't blame your skepticism—your distrust of politics—your dislike of the emphasis on fund raising.

Who can blame comedian George Carlin when he warned that: "The word 'bipartisan' usually means some larger-than-usual deception is being carried out." But there may be some solace in Will Rogers' remark that "We swear at Congress, and we make jokes about them, but if they were not doing it to us in Washington, they would be doing something else against us that might be even worse."

Physicians just don't seem to realize, as former House Speaker Tip O'Neill used to say, "That physicians may have problems, but if only they realized how much they are respected in their community—how much their opinion is valued in any forum."

Were he alive today, Tip's favorite story would be about his proverbial Irishman who needed surgery but whose HMO denied the procedure.

> As luck would have it, the CEO of the HMO lived in his neighborhood, but a personal visit didn't change that decision. Before he left, however, the HMO CEO asked him a question. "Do me a favor," he said, "until today, we've never met. Please look at me. I have a glass eye. Nobody can guess which one it is. Tell me," he said, "which do you think is the glass eye?"
>
> The fellow looked him in the eye and said: "The left eye is the glass eye."
>
> The CEO was astounded and said: "You're right, but how did you know?"
>
> The man said: " It's easy, that was the one with the warmth in it. "

Outgoing President Craig Czarsty has plugged the PAC in his visits to the counties and in his President's Pages. Incoming President-Elect Don Timmerman has worked hard as M.D.PAC Chair, visiting counties and promoting PAC activities. The two have helped our PAC immeasurably and the numbers are as high as they have ever been. But we need to do even better. We continue to face many challenges in Connecticut, as you well know.

The beat goes on. Limited licensed practitioners want your turf—your patients—your livelihood. But without having your training—your experience—your professional judgement.

Make no mistake about it. We are in a war. A war against those who wish to capture our trillion dollar plus health-care sector. A war against those who would dominate the management of medical care. A war against those who would violate the sanctity of the patient/physician relationship. A war against those who would substitute their cold impersonal calculations for your sound medical judgement. A war against those who would threaten your professional independence and crush your spirit. There can be no civilians in this war.

We must all wake up and smell the gunpowder. The enemy is bigger and better equipped than us, so we must make up for it in commitment and zeal. There is so much at stake.

What other profession can trace its roots back thousands of years to the Greek Gods? What other profession is blessed to share the same calling and dedication of the ancient healers? What other profession allows you to be part of something bigger than you are, interact with others and help them? What other profession provides you with such positive feedback from patients? No other profession in the world comes close to yours.

Former President George Bush spoke quite eloquently at the AMA Leadership Conference just two months ago. When asked during the question period whether he would encourage his grandchildren to go into medicine, he replied, "Absolutely. It would give Barbara and me enormous satisfaction. We would be thrilled because I really do believe that you physicians do the Lord's work."

There is too much at stake for us to back off now. The work we accomplish today and tomorrow will impact how his grandchildren and yours view your honored profession. They deserve nothing short of your best!

Is Your Practice Prepared for Y2K?

The Y2K problem impacts nearly every aspect of the care you provide your patients. Medical equipment, communications systems, medical record devices, laboratory-related technology and other devices have the potential to fail or otherwise interrupt the service you provide to your patients.

The AMA has resources that can help physicians. Among the tools they are making available to you are an informative Web site and an important new publication packed with relevant information you can use immediately

"Preparing for the Year 2000" AMA Web site.

This AMA's Y2K Web site is an important interactive resource for physicians, providing regularly updated information about Y2K and assisting physicians with problem solving. A host of related web sites are "hot-linked" from the AMA site, making access to further information easy.

To access, simply log onto the CSMS web site at <www.csms.org> for the direct link to the AMA.

"The Year 2000 Problem: Guidelines for Protecting Your Patients and Practice"

This timely 73-page publication discusses a vast range of clinical, legal and practical resources and information. It contains a year 2000 compliance self-assessment and more than 20 "practical tips" for physicians to apply during their own compliance process. AMA members may download the entire document from the AMA's Y2K web site <http://www.ama-assn.org/not-mo/y2k/index.htm>. In addition to the web site, CSMS has a limited number of copies available.

To order, call the Society at (203) 865-0587, or fax your request to (203) 865-4997. The cost of the book is $10.00, to cover shipping and handling. Please make checks payable to "Connecticut State Medical Society," and mail to: 160 St. Ronan Street, New Haven, CT 06511-2312.

Medicare and Medicaid Compliance

The Health Care Financing Administration (HCFA) has established a toll-free number for physicians providing care to Medicare and Medicaid recipients. The telephone help line is staffed 12 hours a day. To inquire, call 1-800-958-4232, or log onto their web site at <www.hcfa.gov/y2k>. The assistance provided relates to Medicare and/or Medicaid reimbursement only.

Address of the Retiring President

CSMS Annual Meeting—House of Delegates

12 May 1998

CRAIG W. CZARSTY, M.D.

HAVE you heard the story about the man whose home was in the path of oncoming flood waters? As the waters reached his front yard, a fire truck came by and the driver yelled, "Climb on!" "No," said the man, "I put my trust in the Lord and God will save me." Later, as the floodwaters were halfway up the first floor, a boat came by and the pilot yelled, "Climb in!" "No," said the man, "I put my trust in the Lord and God will save me." Still later, the man was on his roof as the waters had become still higher. A helicopter passed over, dropped a rope and the pilot yelled, "Grab the rope!" "No," said the man, "I put my trust in the Lord and God will save me." Well, the waters continued to rise and the man eventually drowned. As he reached the Pearly Gates, he complained quite bitterly to St. Peter that he had put his faith in the Lord yet had drowned anyway. A bit exasperated, St. Peter said, "Look, we sent you a fire truck, a boat, and a helicopter. Just what exactly were you expecting?"

As I look back over my year as president of this Society, I must admit that I am frustrated by the apathy I see among physicians and the antipathy they display towards organized medicine. My question to my colleagues is the same as St. Peter's in the story; just what is it you are expecting? This is a Society whose members in recent times have founded a physician-owned liability insurance company and an HMO. This is a Society which is currently in partnership with the AMA on AMAP which, when successful, will put an end to filling out endless credentialling forms for the myriad organizations with which we participate. This is a Society that has a strong physician health program to aid our colleagues in need and forestall the State from dealing with them punitively. This is a Society that has an extremely strong legislative track record of working for our patients and ourselves. This is a Society, in partnership with the AMA, that raised enough of an outcry to stop HCFA from requiring their new documentation requirements. This is a Society, again in partnership with the AMA, that convinced the United States Department of Justice to investigate the potential merger of Aetna/USHealthCare and Prudential. Just what is it that you are expecting, Doctors?

Because I feel strongly about the value of county medical associations, I have spent the last few weeks representing the Society at several annual county medical association meetings. I spoke with many physicians about how they view the CSMS. The theme I heard most is that it is an organization dominated by men who are close to retiring or retired who are little affected, personally, by the changes in medical practice and who are, therefore, not strongly enough motivated to deal effectively with those changes. Conversely, however, most of the members to whom I spoke feel that they are too busy just practicing medicine to become more involved in organized medicine.

Therein lies the dilemma and it involves nothing less than the future of physicians coming together in their own and their patients' best interests. We have to find ways to attract young physicians, our replacements in leadership. Medical school classes are now half women and have good minority representation. These demographic facts are not reflected in medical association leadership. Studies show that Generation X'ers are not willing to make open-ended commitments to organizations but will work on specific projects. We continue to ask them to commit large blocks of time for meetings usually held in the middle of their workdays. Young physicians are very comfortable working via the internet yet we continue to insist on face to face meetings for even the most routine agendas.

None of these observations about leadership styles will be of any help unless we address a more basic problem. Young physicians will not even be members, let alone leaders, unless we make a concerted effort to adapt to the changing practice styles. As I have said repeatedly, medical associations were formed to provide goods and services to solo or very small group practices. The days of that style of practice are rapidly drawing to a close. Our associations will either change with the times or our days are numbered.

We live in a society that rewards semiliterate athletes and actors with multimillion dollar fortunes to entertain it. That same society is indifferent at best to the economic pressures squeezing the profession which keeps it healthy. Make no mistake; we are the physicians who deliver the best medical care in the world. We are the physicians in the forefront of the human genome project, that promises cures and prevention that we can barely dream about, today. We are the physicians who are fighting to protect our patients from the excesses of the managed-care organizations. If we can do all that, revamping organized medicine should be child's play for us. We need to look at each of our current services and programs to see if they are still relevant and we need to have our fingers on the pulses of changing practice patterns. We need to create a culture in which we regularly ask the members "Just exactly what are you expecting?"

Well, at the ripe old age of 45, I have reached the top rung of the CSMS ladder and it is time for me to step aside. I would rather err on the side of leaving too early rather than too late so I will be looking for other ways in which to be of service to our patients and the profession. I would like to thank Tim Norbeck, Jo Lindquist, and the staff for their assistance and I thank you for the honor of allowing me to lead the Society this past year.

Just what are you expecting, Doctors?

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BOOK REVIEWS

The Bleeding Edge: The Business of Health Care in The New Century, J.D. Kleinke,
An Aspen Publication, Aspen Publishers, Inc.,
Gaitersburg, Maryland, 363 pp., 1998, $30.00.
ISBN 0-832-1190-4

I first became aware of this book's existence when an excerpt of it was published on the August 17, 1998 editorial page of the *Wall Street Journal.* The excerpt, "Why Merger Mania Is Unhealthy for HMOs," said that HMOs were on the slippery down-hill slope and were probably doomed because they couldn't "execute," meaning they couldn't take care of the insurance function and the care function simultaneously. The excerpt concluded: "This may turn out to be the epitaph for the brief, tumultuous revolution that managed care has brought to health care. As the HMOs have reinvented the health-care system, after their consolidations are complete they may prove scrappy enough to reinvent themselves. "

My next awareness of the book came through Tim Norbeck, Executive Director of the Connecticut State Medical Society. He told me it was a "must" read.

Well, read it I did, and I found it a comprehensive, coherent, and engaging analysis of the health-care system's past, present, and future. Basically Kleinke, a former chief executive of a large information company, HCIA, describes the five major forces at work: 1) risk assumption; 2) consumerism; 3) consolidation; 4) integration; and 5) industrialization. He believes that HMOs as we know them are doomed because of the tidal waves of resistance from consumers and physicians. He thinks that HMOs will be replaced by Emerging Health Organizations (EHOs), as yet ill-defined organizations that will be made up of variable combinations of risk-bearing physician and hospital organizations.

His two strongest beliefs are:

One, consumers will lead the revolution. They will mount the ramparts and bring down HMOs. Here's Kleinke talking: "The coming empowerment of health care consumers is here. Spearhead by this generation, it will be ushered in by increased coverage of medical news in the popular media and the proliferation of clinical information and disease-specific support groups on the Internet. And it will reach its full consummation in the purest alternative to traditional and managed care coverage: the Medical Savings Accounts (MSA)."

Two, physicians will lead a counterrevolution and patients will follow them over the top of the ramparts. If you want to feel good about physicians, buy this book and bask in Kleinke's image of physicians: "The nation reveres physicians and resents challenges to their autonomy, clinical hegemony, and judgement. Their moral authority—earned through years of training and personal sacrifices that most Americans can comprehend only enough to be awestruck by it—is reinforced by the mostly noble portraiture of physicians."

Three, some sort of marriage between hospitals and physicians is inevitable: "Between the EHOs, hospitals, and physicians, a marriage of some variety is essential. This may take the form of salary, salary plus quality and efficiency performance incentives, equity participation, or, preferably some combination of all three. But at rock bottom *the physicians must be captive if they are to be effective partners in the economics of risk assumption.*"

Richard L. Reece, M.D.
Old Saybrook

The Business of Medicine
Julie K. Silver, M.D., editor, Hanley & Belfus, Inc.,
Medical Publishers, Philadelphia, paperback,
387 pp., 1998. $25.00. ISBN 1-56053-254-8

For "sheer" usefulness, particularly for young physicians, I find this book hard to match. I've recommended it repeatedly to young physicians who want to find jobs and to older physicians who are seeking salary information so they can negotiate from a position of strength. On page 39 is a list of 21 major recruiting firms and pages 27 and 30 are charts listing physician compensation by years in specialty and by geographic section of the country. That kind of information is hard to come by. The only book I've found that even comes close in usefulness is "The Health Care Almanac: Every Person's Guide to the Thoughtful and Practical Sides of Medicine." The "Business of Medicine" is necessarily uneven because it has 32 contributors and 21 chapters, but its timelessness and selection of material overcome the unevenness problem. Here, for your information, are the titles of the 20 chapters. These titles say more than I can express in words.

1. Solo Practice
2. Organizational Options Available to Physicians
3. How to Find the Perfect Job: What You Need to Know Before, During and After the Interview
4. Signing the Contract
5. Malpractice
6. Physician Compensation Arrangement: Structure, Risk and Opportunities, and Key Items for Negotiation
7. Using the Media to Promote Your Practice

8. Practicing the Art of Medicine
9. Successful Medical Marketing for Practice Survival
10. Running the Office without a Glitch
11. Monitoring the Financial Vital Signs of Your Medical Practice
12. Opportunities in Alternative and Complementary Medicine
13. Physician Involvement in Subacute and Long-Term Care
14. Opportunities in Sports Medicine: The Team Physician Practice Options
15. Using a Medical Newsletter to Promote Your Practice
16. Strategies for an Academic Career
17. Business and Management Training for Physicians
18. From Medicine to Management: When Physicians Become Executives
19. Going to Court
20. Planning for Personal Financial Success

Richard L. Reece, M.D.
Old Saybrook

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Talk to your doctor about getting tested.

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IN MEMORIAM

BARRERA, ALBERTO M., Aurora University Faculty of Medicine, Shanghai, China, 1941. Dr. Barrera was the chief of surgical staff of Chefoo General Hospital in China, relocating to Canada in 1949 where he maintained a private practice until 1962. From 1962 to 1975, he worked in pharmaceutical research and development, acting as medical director for pharmaceutical houses in the United States and Canada. In 1975, he relocated to Niantic where he maintained a general practice. He was a member of the New London County Medical Association, the Connecticut State Medical Society, and the American Medical Association. Dr. Barrera died 9 March 1999 at the age of 81.

BROWN, PATRICK N., Hahnemann Medical College and Hospital, 1943. Dr. Brown practiced dermatology in Meriden until his retirement in 1983. He was a member of the New Haven County Medical Association where he served as president from 1977 to 1978 and as a delegate to the Connecticut State Medical Society for 10 years, the Connecticut State Medical Society where he served on the Committee on Third Party Payments from 1975 to 1983, and the American Medical Association. Dr. Brown died 16 March 1998 at the age of 81.

DeLIBERO, ANTHONY F., Facolta di Medicina e Chiurgia dell'Universita di Roma, Italy, 1945. Dr. DeLibero was an anesthesiologist at St. Vincent's Medical Center in Bridgeport. He was a member of the Fairfield County Medical Association, the Connecticut State Medical Society, and the American Medical Association. Dr. DeLibero died 3 May 1999 at the age of 82.

GULASH, JOHN R., Medical College of Wisconsin, 1940. Dr. Gulash, a pediatrician, maintained a practice in Bridgeport for 40 years and was associated with St. Vincent's Medical Center for over 50 years. He devoted much of his time to treating underprivileged children in the hospital's pediatric clinic. He worked full time in his private practice and at St. Vincent's until last year. He was a member of the Fairfield County Medical Association and the Connecticut State Medical Society. Dr. Gulash died 13 February 1999 at the age of 85.

HEBARD, GEORGE W., Cornell University Medical College, 1936. Dr. Hebard practiced medicine in New Canaan, retiring in 1986. He was a member of the Fairfield County Medical Association where he served as a delegate to the Connecticut State Medical Society during the 1960s, the Connecticut State Medical Society where he served on the Committee on State and National Public Relations, and the American Medical Association. Dr. Hebard died 2 April 1999 at the age of 89.

HENRY, PHILIP D., McGill University Faculty of Medicine, Montreal, 1952. Dr. Henry, a surgeon, practiced geriatric and general medicine in Seymour, Huntington, and Derby. He was active in serving as team doctor for many area high school teams. Dr. Henry was a member of the Fairfield County Medical Association and the Connecticut State Medical Society. Dr. Henry died 28 March 1999 at the age of 79.

KRAMER, ROBERT A., Yale University School of Medicine, 1955. Dr. Kramer practiced pediatrics in the Hartford area for more than 30 years. He served as vice president for medical affairs and as medical director of the former Newington Children's Hospital. Prior to that, he served as chief of pediatrics at Mount Sinai Hospital and was a former associate dean of continuing education at the University of Connecticut School of Medicine. He was also clinical professor of pediatrics and surgery and rehabilitation at the Yale University School of Medicine. Dr. Kramer was a member of the Hartford County Medical Association where he served as a delegate to the Connecticut State Medical Society for 10 years, and the Connecticut State Medical Society where he previously served on the Committee on the Medical Aspects of Sports. Dr. Kramer died 23 April 1999 at the age of 68.

MARTINSON, EDGAR O., Columbia University College of Physicians and Surgeons, 1935. Dr. Martinson practiced general surgery in Brooklyn, New York from 1938 to 1970 and emergency medicine at Middlesex Hospital from 1970 to 1980. He was a member of the Middlesex County Medical Association, the Connecticut State Medical Society, and the American Medical Association. Dr. Martison died 2 April 1999 at the age of 88.

MULFORD, EDWIN H. II, Duke University School of Medicine, 1941. Dr. Mulford, a neurosurgeon, practiced in Fairfield County and was former chief of neurosurgery at Norwalk Hospital. Past president of the Connecticut Neurosurgeons, he was a member of the Fairfield County Medical Association, the Connecticut State Medical Society, and the American Medical Associtation. Dr. Mulford died 7 April 1999 at the age of 82.

POWERS, EDWARD D., New York Medical College, 1952. Dr. Powers was chief of orthopaedics at St. Francis Hospital and Medical Center from 1970 to 1976 and was an assistant professor of orthopaedics at the University of Connecticut School of Medicine. He was in private practice in Hartford for over 40 years, retiring last year. In addition to St. Francis, he served on the staff of Mount Sinai Hospital, Newington Children's Hospital, and Newington Veteran's Hospital. Dr. Powers was a member of the Hartford County Medical Association, the Connecticut State Medical Society, and the American Medical Association. Dr. Powers died 19 March 1999 at the age of 74.

ROTH, FRANK E., New York University School of Medicine, 1925. Dr. Roth practiced pediatrics in the Hartford area for over 60 years. In 1951 he was the first chief of staff at Mount Sinai Hospital and was also chief of pediatrics. Subsequent to his retirement in 1986, Roth became a medical director and worked as a medical consultant for Goodwill Industries. Past chairman of the Connecticut Chapter of the American Academy of Pediatrics, Dr. Roth was a member of the Hartford County Medical Association and the Connecticut State Medical Society. Dr. Roth died 9 April 1999 at the age of 99.

SAMPONARO, NICHOLAS, John Hopkins University School of Medicine, 1929. Dr. Samponaro, an otolaryngologist, maintained a private practice in Torrington and was on the staff of Charlotte Hungerford Hospital until his retirement in 1983. He was a member of the Litchfield County Medical Association, the Connecticut State Medical Society where he was a member of the Committee on Occupational Health from 1962 to 1974, and the American Medical Association. Dr. Samponaro died 13 April 1998 at the age of 95.

STEINBERG, DAVID H., State University of New York at Buffalo, School of Medicine, 1959. Dr. Steinberg maintained a private internal medicine and cardiology practice in Stamford for 33 years. He was an assistant professor and clinical instructor of medicine at Yale University School of Medicine and New York Medical College. He later worked for Cologne Life ReInsurance in Stamford. Dr. Steinberg was a member of the Fairfield County Medical Association and the Connecticut State Medical Society. Dr. Steinberg died 6 April 1999 at the age of 65.

SULMAN, MORRIS, Columbia University College of Physicians and Surgeons, 1936. Dr. Sulman maintained a family practice in New London for 44 years and then a geriatric practice at New London area convalescent homes for many years. He served on the staff at Lawrence and Memorial Hospital. He was a member and former secretary of the New London County Medical Association, the Connecticut State Medical Society where he served on the public relations committee during the 1960's, and the American Medical Association. Dr. Sulman died 2 February 1999 at the age of 88.

WALDRON, SHERMAN L., Tufts University School of Medicine, 1950. Dr. Waldron initially practiced family medicine in North Grosvenordale. In 1967, he opened the Thompson Medical Center. For 34 years he served on the Day Kimball Hospital Medical Staff, the last two of those years he served as president, retiring in 1985. He served on the Northeast Substance Abuse Prevention Council. He was a member of, and held many positions with, the Windham County Medical Association and the Connecticut State Medical Society and was a member of the American Medical Association. Dr. Waldron died 28 April 1999 at the age of 76.

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Papers prepared on a word processor should be submitted on a diskette along with the hard copy.

Please send them to:

H. David Crombie, M.D., Editor
Connecticut Medicine
160 St. Ronan Street
New Haven, CT 06511

CSMS PHYSICIAN PLACEMENT SERVICE

The Society maintains the Physician Placement Service as a *free* service to the medical profession, hospitals, and communities in Connecticut.

***Opportunities* should be typed, double-spaced copy on letterhead and submitted to CSMS, Physician Placement Service, 160 St. Ronan Street, New Haven, CT 06511 (203) 865-0587 or fax to (203) 865-4997. These will be published as space permits and will be distributed to physicians inquiring about such *opportunities*.**

***Physicians wishing to locate* in Connecticut may call the office requesting opportunities in their specialty. Also, candidates are invited to submit a resume to be kept on file with the Society. An announcement of a physician's availability will be published in two issues of *Connecticut Medicine* as space permits.**

Listing of physicians in the Placement Service does not in any way represent certification by the Society. Investigation of credentials and experience is the responsibility of those seeking applicants for positions.

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The Consumer Affairs Division of the Department of Insurance receives, reviews, and responds to complaints and inquiries from state residents concerning insurance related problems. The staff examines each complaint to determine whether statutory requirements and contractual obligations within the commissioner's jurisdiction have been fulfilled. The Consumer Affairs Division coordinates the resources available within the Department to address consumer complaints.

In order for the Division to pursue a formal review of a concern or complaint, the consumer must submit a written explanation to the address listed above with as much pertinent detail as possible. Each written submission to the Consumer Affairs Division will be acknowledged.

Name of person filing the concern or complaint:

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Address: ____

Phone where the Department can contact you: (_____) ______________________________

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Policy Number: ____

Name of Policyholder: ____

Name of Enrollee: ____

Name of Patient: ____

Patient is ___ **self** ___ **dependent** ___**other** (explain)______________________________

The following is a detailed description of the concern or complaint:

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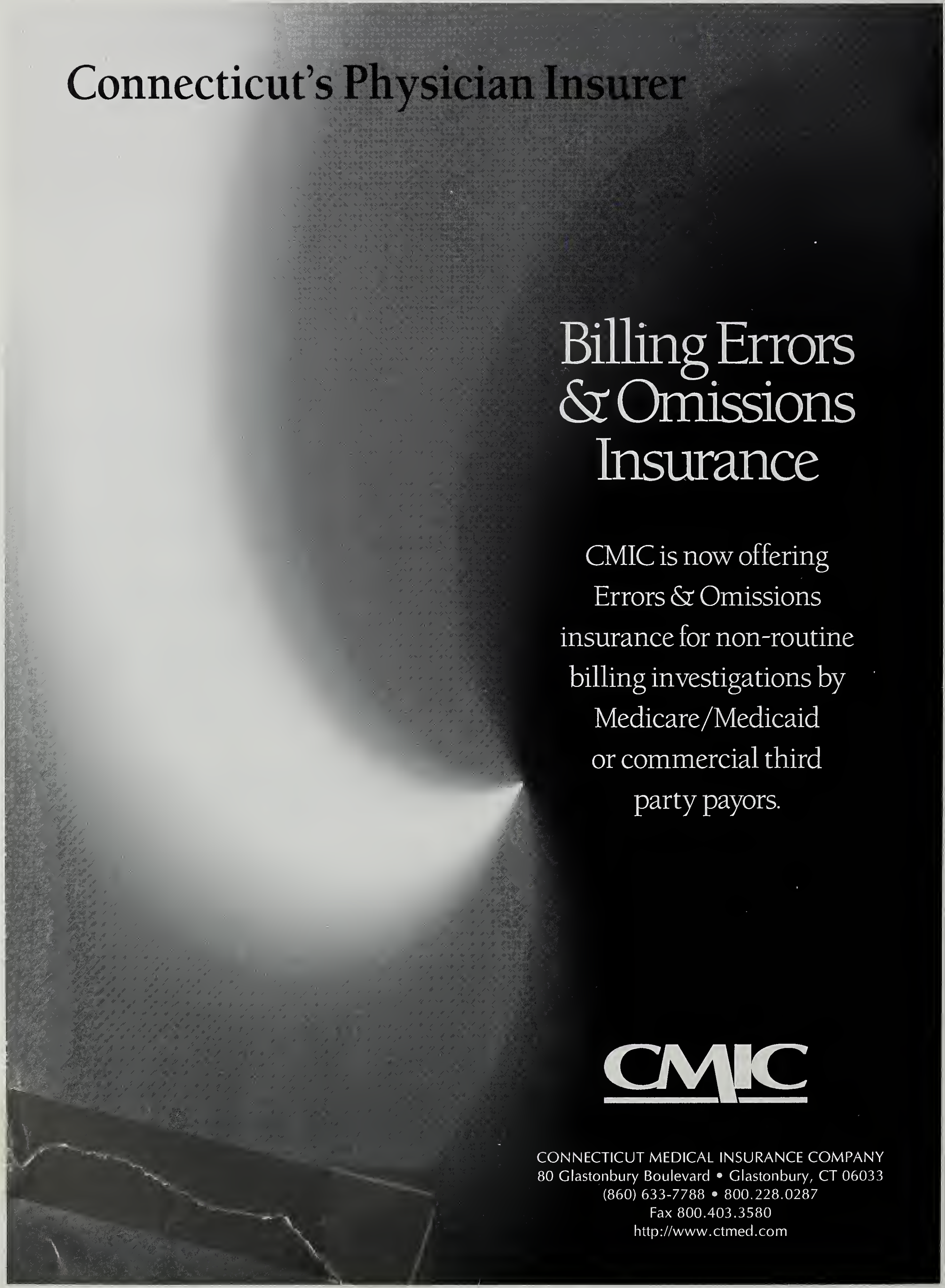

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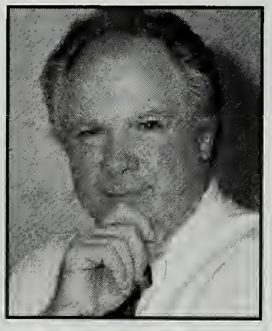

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The Predictive Value of Lymphoscintigraphy for Nodal Metastases of Cutaneous Melanoma

POLLY L. STEPHENS, M.D., STEPHAN ARIYAN, M.D.,
RENATO V. OCAMPO, M.D., AND WEN-JEN POO, M.D.

ABSTRACT—Lymphoscintigraphy is used to identify ambiguous drainage patterns in cutaneous melanoma of the head, neck and trunk. This study evaluated the efficacy and reliability of lymphoscintigraphy to identify the drainage nodes in 51 patients undergoing both elective and therapeutic lymphadenectomy over a seven-year period. All 13 patients who had lymph node metastases during this follow-up period had the metastatic disease in the very lymph node basins identified by lymphoscintigraphy. Most significantly, none of the 51 patients had metastatic disease in lymphatic basins that were not previously identified by lymphoscintigraphy.

Introduction

LYMPHOSCINTIGRAPHY is a nuclear study which was first described by Sherman and Ter-Pogossian in 1953 to identify the lymphatic drainage pattern of cutaneous tumors.[1] The study has become a useful preoperative test for the treatment of intermediate thickness stage I and II cutaneous melanoma. While lymphatic drainage of the extremities is constant and predictable, lymphatic drainage of the head, neck and trunk has been shown to be variable and ambiguous.[2–4] Lymphoscintigraphy is currently used to determine the lymphatic drainage pattern of cutaneous melanoma of the head, neck and trunk for tumor surveillance and/or prophylactic lymphadenectomy.

The practice of prophylactic or elective lymph node dissection for AJCC Stage I and Stage II malignant melanoma of intermediate thickness (1.0 mm to 4.0 mm) is controversial. Lesions less than 1.0 mm in depth have a 0% to 9% chance of nodal metastases, whereas lesions greater than 4.0 mm in depth have a 36% to 60% incidence of nodal metastases.[5–8] It is generally accepted that ELND for tumors less than 1.0 mm in depth is unnecessary due to the low rate of nodal and distant metastases. These tumors have a 95% cure rate with wide local excision alone.[9] It can be argued that ELND is unlikely to change the course of the disease for those tumors greater than 4.0 mm in depth, because about 70% of those patients already have distant metastases.[5] However, for tumor thickness between 1.0 mm and 4.0 mm, the practice of ELND is still debated. The recent use of sentinel lymph node biopsies has been helpful in selecting those patients who would benefit from this operation.

Therefore, the purpose of this study was to determine the reliability of lymphoscintigraphy to predict the site of nodal metastases, if that should occur. We chose to study a group of patients prospectively for over three years to determine the reliability of this diagnostic test as a predictor of the correct draining sites.

Methods

Subjects.—At the Yale Melanoma Unit, 51 patients with localized intermediate thickness cutaneous melanoma of the head, neck and trunk underwent lymphoscintigraphy between 1983 and 1990. The clinical characteristics are shown in Table 1. The patients' ages ranged

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This investigation was supported by NIH Research Grant CA-16359 from the National Cancer Institute. This paper was presented at the annual joint meeting of the Connecticut Society of American Board Surgeons, and the Connecticut Chapter of the American College of Surgeons on 6 December 1996 at Cromwell, Connecticut.

Table 1.—Demographics of 51 Melanoma Patients who Underwent Lymphocintigraphy

	ELMD	Observation	Total
Patients	35	16	51
Male	24	8	32
Female	11	8	19
Age-Mean	50	51	51
Age-Range	20–81	23–73	20–81
Tumor location			
Head/neck	9	0	9
Trunk	26	16	42
Tumor thickness			
< 1.0 mm	1	0	1
1.0–4.0 mm	28	14	42
> 4.0 mm	6	2	8

from 20 to 81 with a mean age of 51. Tumor thickness ranged from 1.0 mm to 8.5 mm in depth. Lymphoscintigraphy was performed prior to wide local excision.

The median follow-up from the first visit to last follow-up was 45 months. More than half of the patients were followed for more than three years or until death, and one third of the patients were followed for greater than five years (Table 2). Five patients were lost to follow-up before one year, and one patient died within one year of diagnosis. Of the 11 deaths, nine patients died of metastatic melanoma.

ELND was offered to all 51 patients. Thirty-five patients (69%) underwent ELND. Thirty-three of these patients underwent ELND at the time of wide local excision of the melanoma, and two additional patients underwent ELND after wide local excision had been performed elsewhere. Sixteen patients chose not to undergo ELND, but to be followed clinically.

Lymphoscintigraphy.—The test was performed using technetium–99m antimony trisulfide colloid. Intradermal injections were administered around the biopsy scar in each of four quadrants. Images were taken at 30 minutes, one hour, and two hours after injection, for a minimum of two hours, or until radioactivity was seen in the liver.

Table 2.—Length of Follow-up of Patients in Study

Years	No. Patients	Percent
< 1	51	100%
1–2	45	88%
2–3	37	73%
3–4	26	51%
4–5	19	37%
> 5	17	33%

Results

Nodal metastases.—Eight of the 35 patients (23%) who underwent ELDN had nodal metastases. These patients ranged in age from 30 to 45 years of age. Tumor size ranged from 1.5 mm to 8.5 mm (mean 3.4 mm).

Five patients had microscopic nodal disease, one patient had microscopic nodal disease followed by gross nodal recurrence, and two patients had a negative ELND followed by subsequent development of gross nodal recurrence. All nodal disease was found in lymphatic basins that had been predicted by lymphoscintigraphy.

The three patients who developed gross nodal recurrence after ELND initially had nodes dissected from the axilla, followed by recurrence in the inferior aspect of these same nodal basins. Recurrence in a previously excised nodal basin can be explained by the fact that a nodal basin is not a discrete entity, and in the case of the axilla, an arbitrary point of distal dissection must be chosen. Recurrence in these three cases illustrates that metastases were probably present at the initial dissection, but not appreciated in two of the three histopathologic evaluations.

Five of the 16 patients (13%) who had chosen to be followed clinically developed gross nodal disease. All cases of subsequent nodal metastases occurred within 14 to 28 months (average 22 months) after the initial diagnosis. In all cases, nodal metastases were only found in lymphatic basins that had been identified by lumphoscintigram.

In addition, after following these patients for a median of 45 months (up to 116 months), no patients developed metastatic disease lymphoscintigraphy.

Discussion

Prophylactic ELND.—The role of elective or prophylactic lymph node dissection for intermediate thickness AJCC stage I and stage II cutaneous melanoma is not yet settled. Patients with cutaneous melanoma (less than 1.0 mm) have a 95% cure rate with wide local excision alone, and a nodal metastatic rate of 0% to 9%.[5–8] The morbidity of the ELND outweighs the potential benefits for most patients in this population. On the other hand, ELND is not routinely recommended for patients with thick cutaneous melanoma either (tumors greater than 4.0 mm), as this population not only has a 36% to 60% incidence of regional nodal metastases, but also has a 70% incidence of occult distant metastases at the time of diagnosis.[6] No disease survival difference has been found in patients with tumor thickness between 4.0 mm and 10.0 mm when comparing prophylactic ELND to observation.[4]

The benefit of prophylactic ELND for intermediate thickness (1 mm–4 mm) cutaneous melanoma has been debated over the years.[7,8,10,11] Opponents of ELND cite a study by Slingluff et al[7] that reported no significant increase in survival in patients who underwent ELND. They also argue that the morbidity associated with ELND (lymphedema, infection) outweighs the potential benefit as only 20% to 25% of lymph node dissections in this population are positive for metastatic disease, thereby subjecting the majority of patients to unnecessary surgery.[7,11]

Proponents of ELND cite a new study from the Melanoma Intergroup Trial that demonstrated a significant increase in disease free survival after ELND for patients with tumors 1.0 mm to 4.0 mm in thickness.[10] This is the first prospective randomized trial to demonstrate a statistically significant survival benefit after ELND.

The most significant survival benefit was demonstrated in patients under 60 years of age with tumors 1.0 mm to 2.0 mm in depth.

Proponents argue that prophylactic resection of microscopic nodal disease is beneficial for two reasons. Firstly, removal of microscopic nodes is preferable to removal of palpable nodes because once nodal metastases become clinically evident (palpable) the cure rate may be less than 10%.[6] Secondly, a study by Wanebo demonstrated 20% nodal metastases in patients who had an ELND, compared to 29% nodal metastases in patients who elected to be observed.[12] This would suggest that not all microscopic disease is diagnosed by histopathology, and the difference between the data of ELND and observation reported by Wanebo suggests that 9% of the ELND patients had microscopic disease that had not been seen by the pathologist. This hypothesis was tested in a study by Heller et al, in which a cell assay technique for the identification of lymph node metastases identified tumor in 48% of the nodes compared to routine histochemical processing which identified tumor in only 20% of the same nodes.[13]

Furthermore, ELND at the time of wide local excision could spare the patient a second operation if lymph nodes become positive, and could improve overall prognosis in some cases.

Adjuvant therapy.—An additional recent study reported by Kirkwood et al. for ECOG may influence the decision of whether or not to perform ELND.[14] The authors reported a statistically significant advantage in overall survival and relapse-free survival among patients with nodal metastases after treatment with interferon alfa-2b in comparison to patients who received no adjuvant therapy. Interferon is now approved as adjuvant therapy for patients with deep melanoma, or primaries of any depth with regional nodal metastases. Therefore, ELND leads to accurate staging and defines eligibility for adjuvant therapy when indicated.

Sentinel lymph node biopsy.—The outcome of sentinel lymph node (SLN) sampling is currently under further evaluation. The sentinel node is the first node (or nodes) that receives direct lymphatic drainage from the tumor site. Sentinel node biopsy is performed first by identifying the primary nodal drainage site with lymphoscintigraphy. Then, immediately preoperatively, the patient receives intradermal injections of Patent Blue V dye or Isosulfan Blue, and the sentinel node is identified intraoperatively by its blue-green coloration; the sentinel node (or nodes) is biopsied, and if metastases are identified, a formal lymph node dissection is performed.[15] O'Brien et al, reported finding a mean of 2.7 sentinel nodes per patient. Sentinel node sampling is a minor procedure which can be performed in an outpatient setting, unless the patient requires conversion to a formal node dissection.[16] The advantages of sentinel node biopsy are clear. It is a relatively minor procedure without the potential morbidity associated with a formal node dissection and should still give the patient an opportunity for accurate staging.

The sentinel node biopsy relies on the premise that melanoma spreads in a linear fashion and that if there is no disease in the node most proximal to the tumor, there will be no disease in nodes further along the drainage route. To date, the false negative rate of sentinel node biopsy is reported as low as 2% and as high as 25%. However, there has been concern that the sentinel nodes may not always be identified by lymphoscintigraphy.[15–17]

Summary

Our study demonstrates that lymphoscintigraphy is an accurate and reliable diagnostic procedure for predicting the lymphatic drainage patterns of intermediate thickness localized cutaneous melanoma. None of the 51 patients followed prospectively in this study developed any metastatic disease in lymphatic basins that were not previously identified by lymphoscintigraphy. This information is applicable both for ELND and for sentinel node biopsy. Lymphoscintigraphy is essential for those patients with melanomas of the trunk and the head and neck who undergo ELND or a sentinel node sampling.

While debate over ELND continues, two recent studies may influence the outcome. The first is the prospective randomized trial that demonstrated the survival advantage after ELND for tumors 1.0 mm to 4.0 mm thick. The second randomized study demonstrated an improved overall survival and disease-free survival after high-dose adjuvant interferon therapy. To be eligible for adjuvant interferon one must have evidence of metastases to lymph nodes.

Subsequent to the presentation of our work at the annual meeting of the Connecticut Society of American Board Surgeons, we have become aware of a study published the following year in the Annals of Surgical Oncology supporting our data.[18] These two studies confirm the predictive value of lymphoscintigraphy for localized cutaneous melanoma.

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A Logical Approach to the Injection Treatment of Varicose and "Spider" Veins

RONALD DEE, M.D.

ABSTRACT—The incurable nature of varicose veins mandates a re-evaluation of excisional surgery both as appropriate therapy and as the gold standard against which to judge alternative treatments.

An injection technique has been developed which enables synchronous *in situ* obliteration of all varicose veins and superficial venous ectasia, regardless of their size or extent, and eliminates the need to identify incompetent perforators.

The results of 742 patients (1,425 legs) were evaluated retrospectively from two to 12 years following initial therapy.

All patients experienced total relief of painful symptoms and 95% were very pleased with the final appearance. Some residual brown pigmentation or a scar from an injection ulcer were the reasons for less than total satisfaction in the remaining 5%. None regretted having undergone the procedure.

Because of the difficulty in sustaining compression in the inguinal area, 6% of patients required a concomitant sapheno-femoral disconnection under local anesthesia immediately prior to injection therapy, but none required stripping.

The results repudiate the generally held belief that injection therapy is only of value for treating postsurgical recurrences, or for eliminating small varicosities and superficial capillary ectasia (spider veins) for cosmetic improvement.

Introduction

BECAUSE the symptoms and complications of varicose veins are manifested only when the veins are distended, suppressing venous flow by permanently occluding them in situ is as effective as excising them. This can be achieved if, following the injection of a suitable irritant to induce a phlebitic reaction, organization of the ensuing thrombus results in permanent fibrous occlusion of the vein.

That this can occur is well recognized. Obliteration of varicose veins often follows one or more episodes of spontaneous thrombophlebitis, just as normal veins often fibrose following thrombophlebitis caused by irritating intravenous infusions.

Historically, injection therapy for varicose veins has met with varying success. Whereas all injected veins appear to disappear because of cessation of flow consequent upon postinjection thrombosis, permanent occlusion depends upon complete cicatrization of the thrombus. To be an effective matrix for the developing granulation tissue, its entire circumference must remain in contact with the vein wall. Unfortunately, the propensity for venous thrombi to contract results in peripheral sinus formation and recanalization. The frequency with which this occurred when injection therapy was at its zenith of popularity during the earlier decades of this century dampened the enthusiasm for its therapeutic value.

A resurgence of interest was stimulated by Fegan's[1] demonstration that compression of the injected vein segment enhances the likelihood of fibrosis both by reducing the size of the thrombus and maintaining its contiguity with the vein wall.

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In an earlier study, Lufkin and McPheeters[2] noted that the thrombi which develop at the sites of chemically induced phlebitis are rich in platelets and fibrin, adhere firmly, and are more likely to undergo organization and fibrosis than propagating thrombus which consists mainly of red blood cells entangled in a fibrin mesh.

Integrating these data, a technique of injection therapy with compression has been developed which fulfills the criteria considered to be the *sine qua non* for successful varicose vein therapy: ie, elimination of all the varicosities and all incompetent perforators. Both are achieved by injecting at close intervals along each varicose vein. The extended area of production of platelet and fibrin-rich thrombi, coupled with external compression, enhance the likelihood of occlusive fibrosis, while total obliteration of all the varicosities renders any reflux via incompetent perforators ineffectual without having to pinpoint their precise locations.

Despite the reported safety of injecting the long saphenous vein at the sapheno-femoral junction,[3] a preliminary Trendelenburg ligation was performed under local anesthesia immediately prior to the injection therapy in the comparatively few patients who exhibited significant femoro-saphenous reflux because of the difficulty in maintaining continuous pressure in the groin.

Throughout the treatment patients remained fully ambulatory, including those who underwent a preliminary ligation, and virtually all were able to pursue their usual daily activities.

Patient Selection

Treatment was contraindicated in patients with arterial insufficiency and those whose symptoms were unrelated to their varicosities. The significant, but not specific, diagnostic feature of pain due to varicose veins is that it is rapidly relieved by leg elevation.

With the patient standing, a palpable, tensely dilated saphenous vein in the groin was always associated with significant femoro-saphenous reflux, which was confirmed by the Trendelenburg test using digital pressure rather than a tourniquet. Sonography was not used because the sensitivity of the test could demonstrate clinically insignificant reflux which might result in unnecessary Trendelenburg ligations. Sonography was not used to locate varicose veins; varicose veins which are neither palpable nor visible should not be treated.

Since varicose veins, *per se*, do not cause edema, patients with pitting edema or other clinical manifestations of deep venous incompetence were not treated. The unnecessary expense of duplex scanning or other studies of deep vein function were unnecessary because documentation of subclinical deep venous insufficiency would not contraindicate therapy.

Injection Technique

Since even large varicose veins do not necessarily cause bulging of the overlying skin, the extent of the disease was determined by palpating the limb with the patient standing and outlining the vein with a skin marker.

Several tuberculin syringes, each with a 27 gauge, 0.5 inch clear hub needle attached, were prefilled with 0.3 ml. of 1% sodium tetradecyl sulfate, and several with a 30 gauge 0.5 inch needle prefilled with 0.9 ml. 0.3% solution.

Except for the proximity of the injection sites, the injection technique was similar to that previously described by the author.[4] Commencing either proximally or distally, whichever was more convenient, a venipuncture was made with a syringe containing 1% sodium tetradecyl sulfate. After withdrawing a small amount of blood into the needle hub to confirm its accurate placement, a drop of solution was injected which served both to clear the needle and to test for any untoward reaction to the medication. The syringe was taped to the skin and the process was repeated at approximately one inch intervals along each varicosity.

Carefully avoiding dislodging the syringes, the patient was positioned supine on the examining table with the leg elevated about 40 degrees on a padded heel stand to empty the veins and, commencing distally, each syringe was slowly injected and removed. With the limb replaced on the table all superficial venous and capillary ectasia were injected with 0.3% solution.

Method of Compression

Strips of polyurethane foam sponge, two by five inches in cross section, were used for compression. The density of the sponge was such that 30 mm to 40 mm of mercury pressure was required to fully compress it.

With the limb elevated a strip of foam sponge, the edges beveled to prevent pressure blistering, was applied over the posterior aspect of the thigh and calf and separated from the skin with a thin layer of polyester fleece. After applying similar strips over the treated veins, all were loosely held in position with a zinc oxide (Unna) impregnated cotton bandage to the calf and thigh, but the more flexible J-Wrap® bandage was used around the knee.

Commencing at the ankle, the sponges were fully compressed with each turn of a four-inch one-way stretch elastic adhesive bandages, Elastikon®, a smooth even application being facilitated by the ointment in the Unna bandage which prevented the adhesive from adhering to the sponges. The upper edge was prevented from rolling down with activity by overlapping it with four-inch Microfoam® adhesive tape around the thigh overlapping its upper edge. The ankle and foot were wrapped with three-inch Elastikon®, with the toes exposed and the

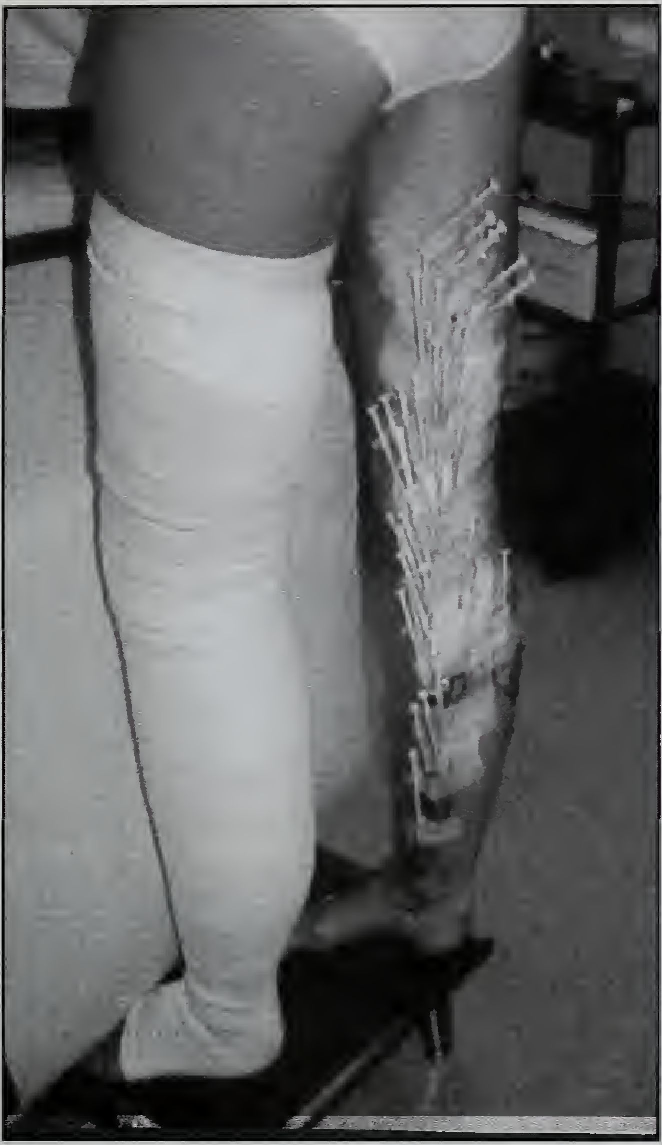

Figure 1.—A 38-year-old female showing placement of the syringes. The left leg was treated three hours earlier.

bandaged limb enclosed in Tubigrip® stockinet, size D. Plastic over-stockings were supplied to enable showering.

Patients were advised to walk at least two to three miles daily, but cautioned to avoid fully flexing the bandaged knee for more than twenty or thirty seconds at a time, as when kneeling or squatting, because of potentially excessive pressure on the popliteal vessels. During long car journeys, half-hourly stops with a short walk were recommended.

The average time to treat each leg was one and a half hours. If both legs were treated on the same day, three hours elapsed between treatments to permit excretion of the medication (Fig. 1).

After Care

Compression was removed after one week. Palpable, sometimes tender, indurated segments of the treated veins, which were often caused by central liquefaction of the thrombus, required evacuation. Such collections were described by Lufkin and McPheeters[2] who observed that: "... in certain portions of the vessels, organization seemed to have come to a standstill, with dense fibrous tissue containing pigment at the periphery of the vessel lumen, and semifluid hemolyzed blood remaining in the center." If left untreated, fibrosis would be deterred, and transmural dissipation of hemosiderin from erythrocyte breakdown products could cause brown discoloration of the overlying skin. Orbach[5] recommended evacuating these segments with a #11 scalpel blade, but aspiration with an 18-gauge needle usually sufficed.

The limb was compressed, as before, for two more weeks, and patients were subsequently seen at two to six week intervals, depending upon their progress. At each visit, segments with liquefying thrombi were evacuated, and any persistent or newly developing varicosities injected without compression because of their small size.

Complications

1. Adverse reaction to the medication.—There were no adverse reactions during or immediately following the initial treatment. One female patient developed an urticarial reaction after receiving more injections six months after the initial therapy despite having received several injections during follow-up visits without incident. Another female patient had a similar reaction, associated with slight dysphagia, two years after the initial therapy. In both cases the reactions occurred within about 10 minutes of the injections and each responded to oral antihistamines.

2. Premature removal of the bandages.—Bandages were prematurely removed in seven patients. Two, one male and one female, because of contact dermatitis, and five, one male and four females, because the bandages felt too confining. Favorable results were ultimately attained but required more prolonged follow-up therapy.

3. Skin ulceration secondary to injection.—Small ulcers ranging in size from approximately 0.3 cm to 1 cm in diameter developed at sites of injection of telangiectasia in 185 legs (13%). These were probably caused by reflux into feeding arterioles due to overzealous injection into ectatic capillaries, rather than extravasation of solution, as evidenced by the rapid blanching which invariably heralded the ulceration.

4. Brown discoloration of the skin.—Cutaneous discoloration due to hemosiderin deposits occurred in 513 legs (36%). These varied in size from a freckle to linear discoloration for several inches over treated varices. Ninety five percent faded within two years, frequently within a few weeks.

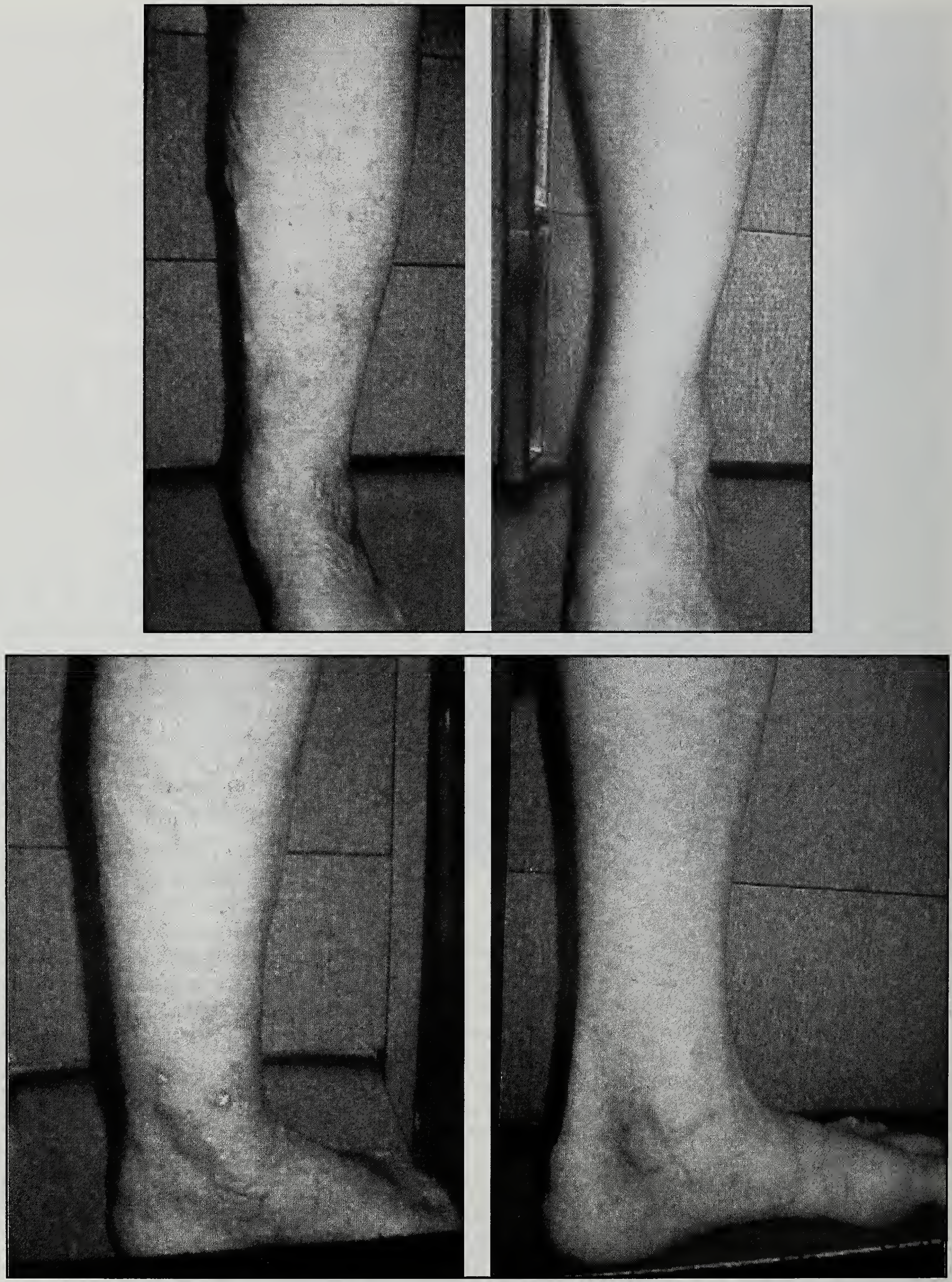

Figure 2a.—A 37-year-old female with typical eczema and ulceration associated with varicose veins, before, and two years following therapy.

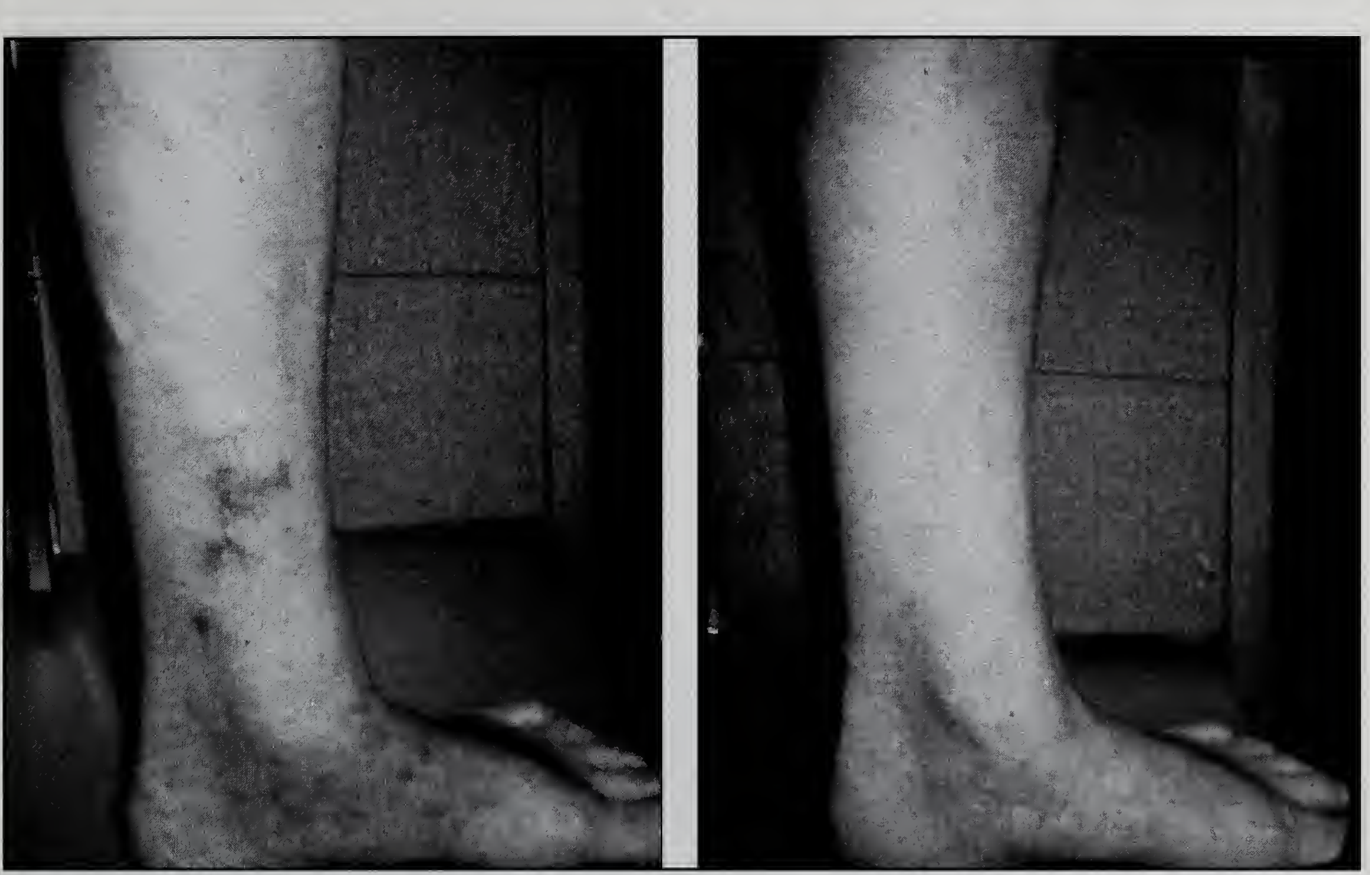

Figure 2b.—A 33-year-old female with varicose eczema and pigmentation prior to and five years after therapy.

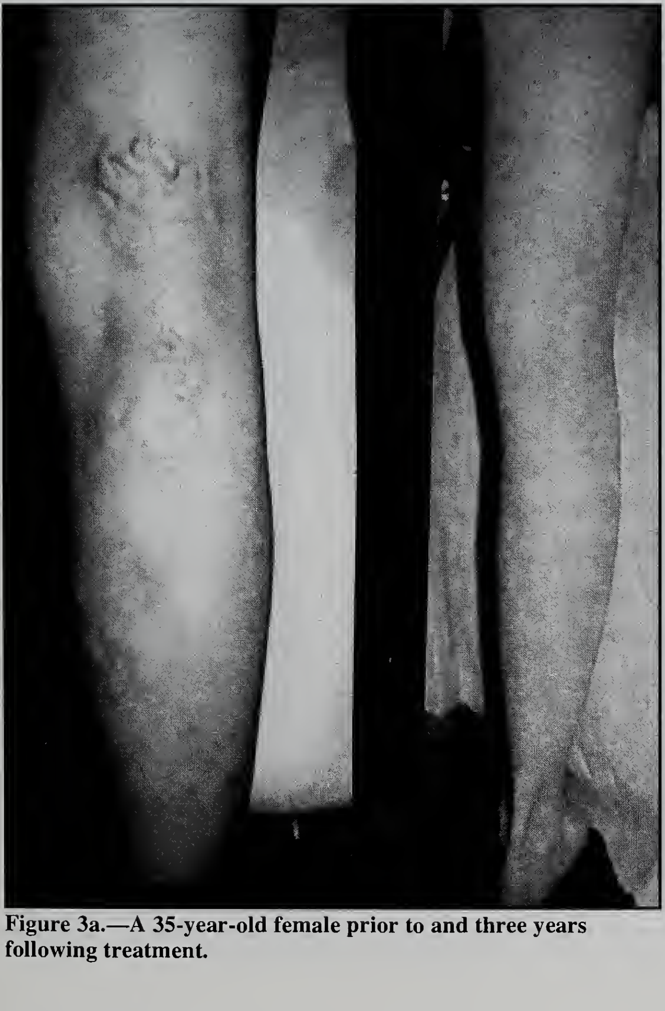

Figure 3a.—A 35-year-old female prior to and three years following treatment.

5. *Post trendelenburg ligation.*—There were no intraoperative or postoperative complications in patients who required a preliminary Trendelenburg ligation.

Results

Seven hundred forty-two patients, 696 (94%) women and 46 (6%) men, aged from 18 to 73 years were treated and followed for a period ranging from two to 12 years. Both legs were treated in 683 patients (92%), totaling 1,425 legs. Three hundred sixty- three legs (25% of legs) had previously undergone stripping with multiple distal ligations, 47 (13%) more than once. Of the legs not previously stripped, 67 (6%) required a preliminary Trendelenburg ligation, two bilaterally. Of those that had been stripped, one required religation.

Painful symptoms abated in all cases. Typically small, painful varicose ulcers prone to hemorrhage and varicose eczema healed rapidly and did not recur (Fig. 2a); associated pigmentation faded, sometimes completely (Fig. 2b).

Despite rapid relief of symptoms and early cosmetic improvement, treatment was not considered complete until all varicosities were deemed to have fibrosed and there were no significant telangiectases. This usually took about 18 months, with an average of four to eight weeks between visits. Upon completion of therapy, patients were requested to return semi-annually or annually to maintain

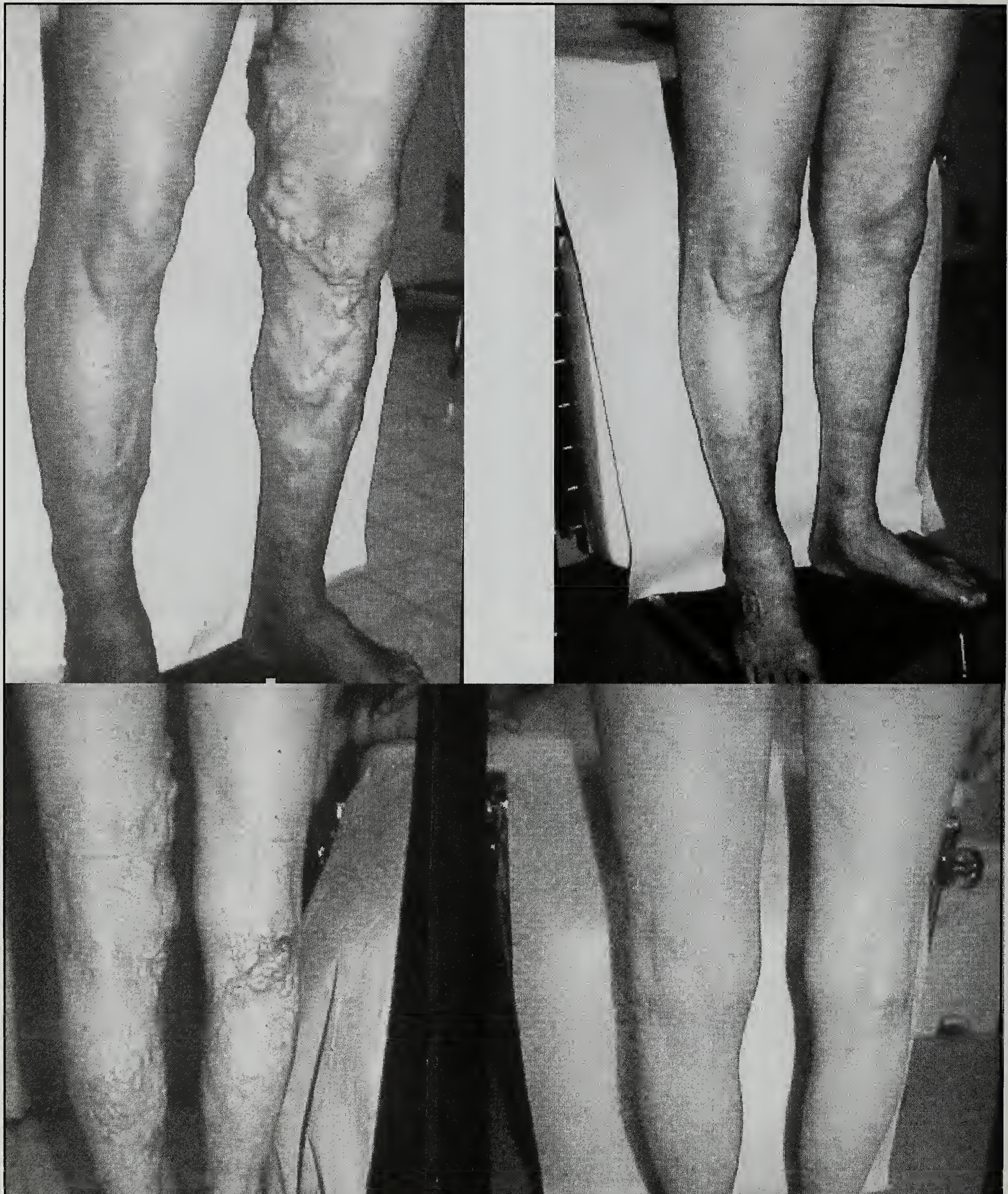

Figure 3b.—A 58-year-old male before and nine years following treatment. Only the left leg required a preliminary femoro-saphenous disconnection.

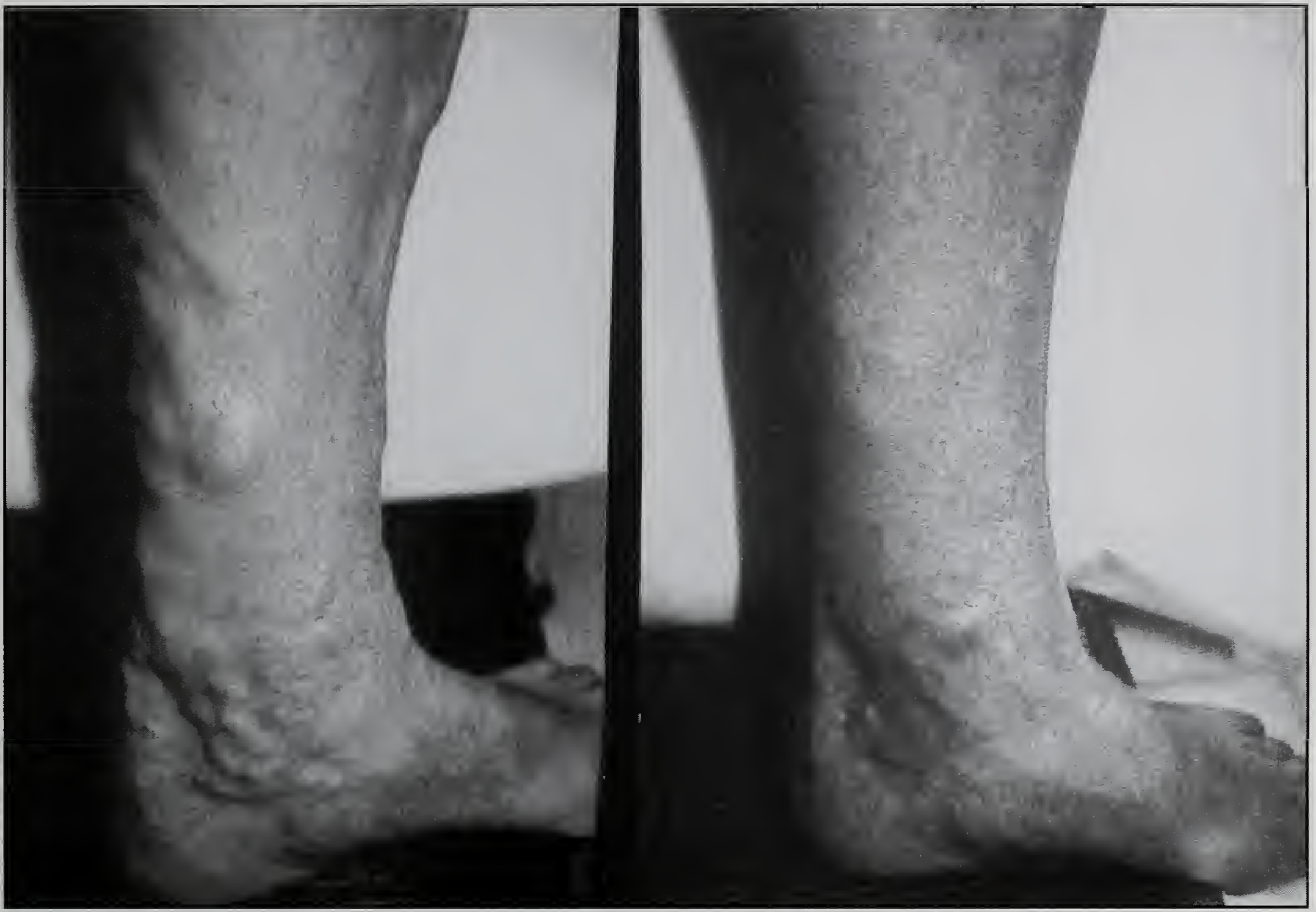

Figure 4.— A 55 year old male, three years after treatment of recurrences following two previous operations, including stripping. There was no need to identify any associated incompetent ankle perforators.

the status quo (Fig. 3a,b). Any newly developing varicosities, or vascular ectasia, were injected before they became large enough to require further compression.

Discussion

Much of the adverse criticism regarding injection therapy for varicose veins stems from the failure to differentiate between its unquestionable potential for success and the ability to achieve it.

Although the application of compression to encourage cicatrization was a major impetus for its renewed acceptance, compression must be sustained for a sufficient length of time for granulation tissue to supplant the thrombus. Elastic crepe bandages are unsuitable for this purpose because they loosen within a few hours, as Raj[6] has demonstrated with pressure studies. Furthermore, the tendency for elastic crepe bandages to roll down can produce a tourniquet effect in the thigh, with the possibility of femoral vein thrombosis and pulmonary embolism,[7] and excoriation of the skin in the popliteal area.

Many agree with Logren[8] that the cause of recurrences following excisional surgery is the failure to ligate all incompetent perforators. But, in order to do so, they must be identified. Unfortunately they are elusive[9,10] and many may be missed because of the erroneous belief that they necessarily coincide with the more prominently protruding varicosities.

There is no need to locate them, however, if the "target veins" can be obliterated, even when dealing with recurrences (Fig. 4). Although this is the aim of excisional surgery, the procedure is lengthy and tedious and often terminated early. Even the most painstaking dissection in experienced hands may not be successful, Myers[11] reported the need to inject some residual varices one week post-operatively.

Although the method of compression is different, the described procedure is essentially a logical extension of that recommended by Reid and Rothnie[12] who advocated injecting at four- to six-inch intervals in order to achieve "diffuse sclerosis." By juxtaposing the injection sites more closely, "total" sclerosis can be achieved, and all the requirements of varicose vein therapy fulfilled.

Conclusions

Unlike excisional surgery, relief of symptoms can be combined with cosmetic enhancement in all cases of

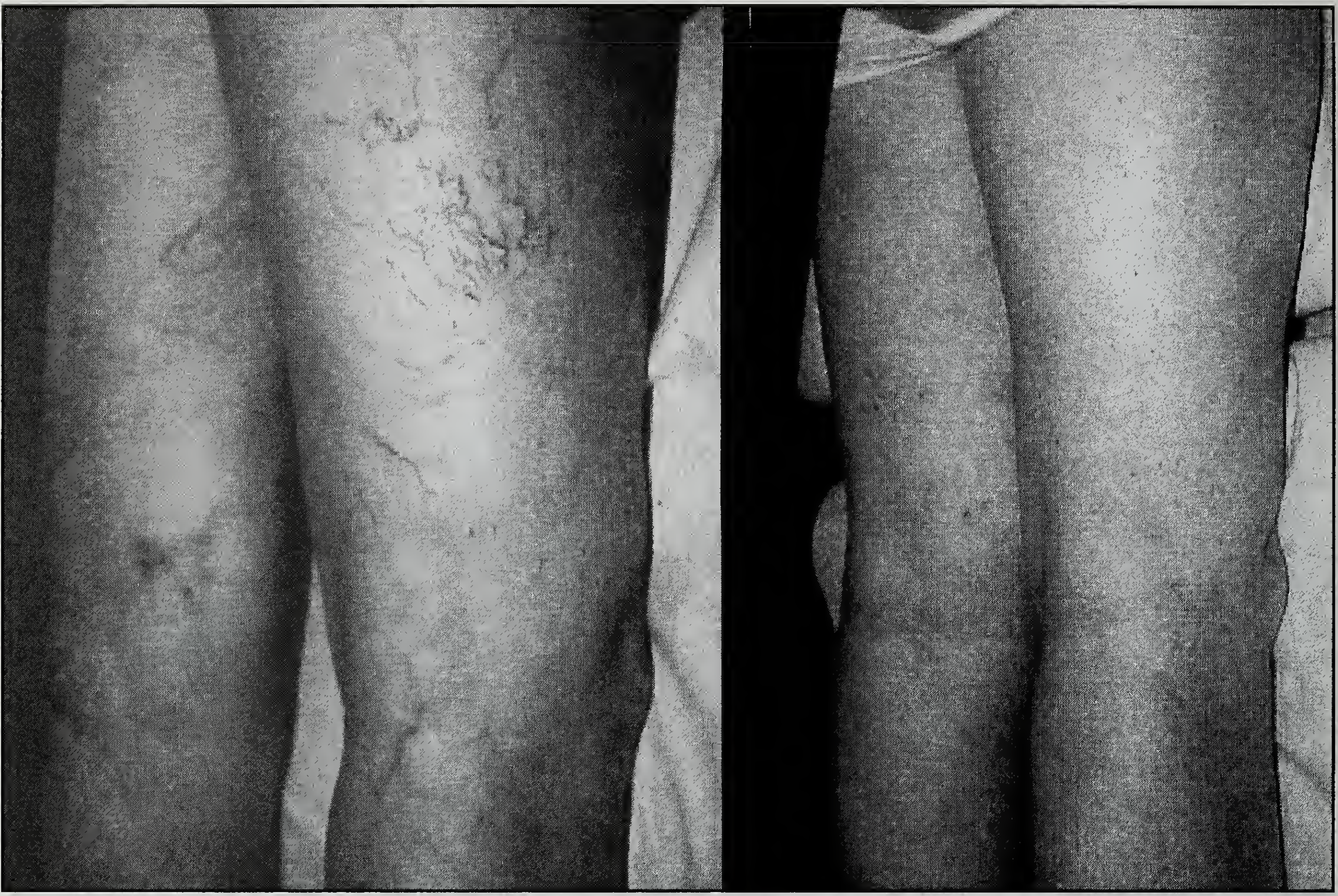

Figure 5.—Cutaneous vascular ectasia in a 63-year-old female prior to and three years following therapy.

injection therapy by virtue of being able to treat simultaneously cutaneous vascular ectasia while avoiding unsightly scarring (Fig. 5). The results more than compensate for the time, perseverance, and sedulous attention required to achieve the desired outcome, and the ability, in most cases, to preserve the long saphenous vein as a potential arterial conduit fulfills Knapp's poignant plea: "Surgeon, Spare that Saphena." [13]

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Iatrogenic Vitamin D Intoxication: Report of a Case and Review of Vitamin D Physiology

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Introduction

VITAMIN D is a widely available over-the-counter diet supplement as well as a prescription drug for the treatment of osteoporosis, renal and liver failure, malabsorption, and hypoparathyroidism. Iatrogenic vitamin D intoxication is a rare but well-recognized cause of hypercalcemia,[1] which can be associated with significant morbidity, and even mortality, if it is left untreated. The primary-care physician must be familiar with the proper use of the different preparations of vitamin D. We present a case of iatrogenic vitamin D intoxication and discuss the physiology and pharmacology of vitamin D.

Case Report

A 78-year-old white female was admitted to the hospital with deterioration in her mental status. She had a past medical history of osteoporosis with multiple vertebral compression fractures and kyphosis. Risk factors for osteoporosis included peptic ulcer disease treated with partial gastrectomy, chronic obstructive pulmonary disease, and early menopause at the age of 40 without hormone replacement. Additionally, she smoked two packs of cigarettes per day and had a low calcium intake. Ten years after menopause, the patient suffered her first vertebral compression fracture. Work-up at that time included normal thyroid function tests and serum protein electrophoresis. Her compression fracture was attributed to postmenopausal osteoporosis and she was initially treated with sodium fluoride, calcium, and vitamin D. Sodium fluoride was discontinued after five years of treatment. Over the next 10 years the patient had multiple vertebral compression fractures and was treated sequentially with calcitonin and cyclical etidronate. The patient's osteoporosis was stable with no further fractures while on etidronate. She continued to take Os-Cal 250 + D which contains 250 mg of elemental calcium and 125 units of vitamin D.

Two and half weeks prior to this admission the patient was admitted to a hospital for pneumonia. In addition to antibiotic therapy, she was prescribed calcium carbonate 1,000 mg three times a day and calcitriol 0.5 micrograms a day, but 50,000 units a day of vitamin D was incorrectly substituted. She was discharged home after 10 days of hospitalization. Her serum calcium level on discharge was normal. In addition to the calcium carbonate and vitamin D, she continued to take her six daily tablets of Os-Cal 250 + D. Four days prior to admission the patient was nauseated with decreased oral intake. Over the next few days she lost 2 kg in weight and developed increased lethargy, weakness, dizziness, and confusion. On the day of admission the patient was somnolent, lethargic, and verbally unresponsive. Medications on admission included furosemide 20 mg a day, cefuroxime 500 mg twice daily, ticlopidine 250 mg twice daily, cimetidine 400 mg twice daily, vitamin D 50,000 units a day, calcium carbonate 1,000 mg three times a day, and six tablets of Os-Cal 250 + D daily.

Physical examination on admission revealed a slender white female who was lethargic, confused, and dehy-

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drated. Her temperature was 97.6°F, and her blood pressure was 180/90 mm Hg with a pulse of 75 beats per minute. Her mucous membranes were dry without erythema or discharge. Her neck was supple with no jugular venous distention or lymphadenopathy. Examination of her heart, lungs, and abdomen was unremarkable. Her neurological examination was without focal neurological findings.

On admission, her serum electrolytes and renal function tests were significant for an elevated bicarbonate of 45 mmol/L, a creatinine of 1.9 mg/dl (baseline value of 0.8 mg/dL, during the prior hospitalization), a markedly elevated serum calcium of 21 mg/dL with an albumin of 3.3 mg/dL and a phosphate of 4.4 mg/dL. Her liver function tests were normal.

The patient was admitted to the hospital and her calcium and vitamin D supplementation were discontinued. She was treated with normal saline, furosemide, and a single 60 mg dose of intravenous pamidronate. The serum calcium level returned to normal over the next two days. Her renal function and her mental status slowly returned to her baseline over the following weeks. Work-up for her hypercalcemia revealed normal levels of parathyroid hormone and parathyroid-hormone-related protein, but elevated 25-hydroxy vitamin D (280 ng/mL, normal reference range of 10–55 ng/mL), and normal 1,25-dihydroxy vitamin D (39 pg/mL, normal reference range of 24–65 pg/mL), consistent with vitamin D intoxication.

Discussion

In order to better understand this patient's hypercalcemia, it is important to review the physiology of Vitamin D.

Natural sources of vitamin D.—Vitamin D is a fat-soluble vitamin that can be obtained from exogenous sources or synthesized endogenously (Fig. 1). Exogenous vitamin D naturally occurs in two forms, ergocalciferol (vitamin D_2) and cholecalciferol (vitamin D_3). Vitamin D_2 is normally found in fungi, yeasts, and plants, whereas vitamin D_3 can be found in fatty fish such as salmon, mackerel, and cod liver oil. Vitamin D can also be obtained from butter, eggs, and foods fortified with vitamin D, including some cereals, bread products, and milk.[2] Both vitamin D_2 and D_3 have the same biologic potency in humans.

Vitamin D_3 is synthesized from 7-dehydrocholesterol in human skin in a reaction that is catalyzed by sunlight exposure. When a person is exposed to sunlight that is sufficient to produce total body erythema, the amount of vitamin D_3 synthesized in the skin is equivalent to 10,000 to 25,000 IU of vitamin D.[3] Melanin, a natural sunscreen, can absorb ultraviolet irradiation and decrease vitamin D_3 synthesis in the skin.[4] Therefore, a person with dark skin requires longer exposure to sunlight in order to obtain the same amount of vitamin D. Chronic use of sunscreens has also been reported to cause vitamin D deficiency when combined, with inadequate oral intake.[5] Latitude, time of day, and season of the year can dramatically affect the production of vitamin D_3. For example, between the months of November and February in Boston, essentially no vitamin D_3 is made in the skin.[5]

Vitamin D metabolism.—After sufficient exposure to ultraviolet B (UVB) irradiation, 7-dehydrocholesterol (provitamin D_3) is converted into previtamin D_3, which subsequently undergoes a thermally induced isomerization into vitamin D_3.[5] Similarly, vitamin D_2 is formed by UVB irradiation of ergosterol that occurs in fungi, yeasts, and plants. The vitamin D_3 is then translocated from the epidermis into the circulation by the vitamin D-binding protein. This protein also binds vitamin D from the diet.

Vitamin D is biologically inactive until it undergoes successive hydroxylations in the liver and kidney. In the liver, vitamin D is metabolized to 25-hydroxyvitamin D, [25(OH)D], by hepatic mitochondrial cytochrome P450-vitamin D-25-hydoxylase.[4–7] This hydroxylation step is not tightly regulated and so the serum level of 25(OH)D reflects the dietary intake and endogenous production of vitamin D.[4,7] In addition, 25(OH)D has a long half-life of 21 days. Therefore, the measurement of serum level of 25(OH)D is useful to determine the total body storage of vitamin D in cases of suspected vitamin D deficiency or intoxication. Chronic liver disease that impairs more than 90% of liver function can lead to a 25(OH)D deficiency due to inadequate hydroxylation. Once 25(OH)D is formed, it is again bound to vitamin D-binding protein and transported to the kidney for an additional hydroxylation to 1,25 dihydroxyvitamin D ($1,25(OH)_2D$).[4,6,7] In contrast to the enzymatic process in the liver, the hydroxylation in the kidney is tightly regulated by the renal mitochondrial cytochrome P450-25(OH)D-1α-hydoxylase activity. The activity is enhanced by parathyroid hormone (PTH), hypocalcemia, and hypophosphatemia but inhibited by $1,25(OH)_2D$.[4,6,7,8] Other factors that enhance $1,25(OH)_2D$ production include increased levels of estrogen, prolactin, and growth hormone.[3,4] Aging may blunt the up-regulation of the renal production of 1,25(OH)2D by PTH and thus partially explain the age-related decrease in intestinal calcium absorption.[9,10] In its target tissues, as well as in the liver and kidney, $1,25(OH)_2D$ undergoes further hydroxylation in its side chain and is finally metabolized into the biologically inactive calcitroic acid.[4,6,7]

Vitamin D physiology.—The major role of vitamin D in the body is to maintain calcium homeostasis through its action on the intestine and bone. Circulating $1,25(OH)_2D$ bound to the vitamin-binding protein is taken up by the cells and binds to a specific nuclear vitamin D receptor (VDR).[11] The VDR-vitamin D complex along with retinoic

$$\underset{\text{(Provitamin D}_2\text{)}}{\text{Ergosterol}} \xrightarrow{\text{UVB irradiation}} \underset{\text{(Vitamin D}_2\text{)}}{\text{ergocalciferol}} \xrightarrow{\text{liver}} \underset{\text{(25[OH]-D}_2\text{)}}{\text{25-hydroxyergocalciferol}} \xrightarrow{\text{kidney}} \underset{\text{(1,25[OH]}_2\text{-D}_2\text{)}}{\text{1,25 dihydroxyergocalciferol}}$$

$$\underset{\text{(Provitamin D}_3\text{)}}{\text{7-dehydrocholesterol}} \xrightarrow{\text{UVB irradiation}} \text{previtamin D}_3 \xrightarrow{\text{thermal isomerization}} \underset{\text{(Vitamin D}_3\text{)}}{\text{cholecalciferol}} \xrightarrow{\text{liver}} \underset{\text{(25[OH]-D}_3\text{)}}{\text{calcifedio}} \xrightarrow{\text{kidney}} \underset{\text{(1,25[OH]}_2\text{-D}_3\text{)}}{\text{calcitriol}}$$

$$\text{Dihydrotachysterol} \xrightarrow{\text{liver}} \text{25-hydroxy-dihydrotachysterol}$$

Adapted from Facts and Comparisons (24)

Figure 1.—Vitamin D Metabolism

acid X receptor binds to vitamin D response elements in the DNA sequences inducing specific gene transcription and protein translation.[12] In the intestine, the effect of vitamin D increases the production of calcium-binding proteins (calbindins) and plasma membrane calcium pump proteins.[13] In addition, $1,25(OH)_2D$ also increases sodium-dependent phosphate absorption in the intestine.[14] Most calcium absorption takes place in the duodenum, whereas the phosphate absorption occurs mainly in the jejunum and ileum.[4,6] In the bone, $1,25(OH)_2D$ increases the expression of osteocalcin, osteopontin, and alkaline phosphatase.[4] In addition, $1,25(OH)_2D$ stimulates immature osteoclastic precursors to differentiate into mature osteoclasts.[4] The mature osteoclasts, along with PTH, lead to mobilization of calcium stores from bone. When there is sufficient dietary calcium, $1,25(OH)_2D$ can promote mineralization of osteoid laid down by osteoblasts, resulting in the deposition of calcium hydroxyapatite into the bone matrix.[4,6]

Besides intestine and bone, VDR is also found in many tissues including parathyroid glands. $1,25(OH)_2D$ binds to VDR in the parathyroid glands and decreases the production and secretion of PTH.[15] This has been used as a treatment for secondary hyperparathyroidism in patients with end stage renal disease. Cells such as lymphocytes, epidermal skin cells, and tumor cells also possess VDR, and $1,25(OH)_2D$ can inhibit proliferation and induce terminal differentiation in these cells.[11] One of the clinical applications of this finding is in the treatment of psoriasis, where topical vitamin D analogues have been used successfully.

Vitamin D deficiency.—Vitamin D deficiency can be caused by inadequate endogenous production, insufficient exogenous intake, malabsorption, and certain medications. Inadequate sunlight exposure may result in vitamin D deficiency, particularly in older, housebound individuals. Aging can also significantly diminish the capacity of the skin to produce vitamin D_3. As compared with a young adult exposed to the same amount of sunlight, a person over the age of 70 has more than a four-fold reduction of vitamin D_3 production.[16] Hypovitaminosis D may also be common in hospitalized patients. A recent study of medical inpatients with a mean age of 62 years found that 57% were vitamin D deficient, 22% with severe vitamin D deficiency.[17] Of note, exposure of the hands, face, and arms to suberythemal doses of sunlight as little as two to three times a week is usually adequate to prevent this.

Vitamin D is naturally present in relatively few foods. The main sources of vitamin D are fatty fish, butter, eggs, and fortified foods. The National Research Council of the United States recommends an intake of 200 IU per day for adults. In the absence of sufficient sunlight exposure, the daily oral intake of vitamin D should be between 600-800 IU.[5,18,19] Fat malabsorption syndromes such as in Crohn's disease and Celiac sprue can decrease intestinal absorption of vitamin D, leading to low or even undetectable levels of 25(OH)D. This may occur even in the presence of adequate UVB exposure and therefore endogenous production of vitamin D in the skin. This paradox is explained by the fact that the malabsorption interrupts the enterohepatic circulation of vitamin D metabolites; these metabolites in bile are not reabsorbed and recycled in normal individuals.

Anticonvulsants such as phenobarbital and phenytoin can induce the metabolism of vitamin D in the liver leading to vitamin D deficiency. Patients taking these medications should have two to five times the recommended daily allowances (RDA) for vitamin D.[3,4] Chronic use of high-dose glucocorticoids can lead to osteoporosis by directly inhibiting vitamin D-mediated intestinal calcium absorption.

Vitamin D excess.—The hypercalcemia in vitamin D intoxication is a result of a combination of enhanced intestinal calcium absorption and increased bone resorption.[20,21] The hypercalcemia induces free water diuresis resulting in dehydration, further impairing the excretion of calcium. Hypercalcemia induced by Vitamin D_2 or D_3

excess is mediated by high levels of 25(OH)D. In a high concentration, 25(OH)D appears to be able to interact with $1,25(OH)_2D$ receptor (VDR) in intestine and bone. In the present case, as well as other patients presented elsewhere,[21] there were elevated levels of 25(OH)D without concomitant changes in $1,25(OH)_2D$.

Early symptoms experienced in hypercalcemia include weakness, fatigue, dizziness, somnolence, headache, anorexia, nausea, vomiting, abdominal cramps, constipation, and emotional irritability. As the calcium level continues to increase, hypercalcemia can induce diabetes insipidus with polyuria and polydipsia. More severe hypercalcemia may present with confusion, ataxia, frank psychosis, coma, cardiac arrhythmia, and seizures. The high concentration of serum calcium, especially along with a high level of serum phosphate, predisposes patients to develop metastatic calcification, which may result in renal or cardiac failure (Fig. 2).

Early:
- Weakness
- Fatigue
- Dizziness
- Somnolence
- Abdominal cramps
- Emotional irritability
- Headache
- Anorexia
- Nausea
- Vomiting
- Constipation

Progressing:
- Polyuria
- Polydipsia

Severe:
- Confusion
- Frank psychosis
- Cardiac arrhythmia
- Renal failure
- Ataxia
- Coma
- Seizure
- Cardiac failure

Figure 2.—Symptoms of hypercalcemia resulting from Vitamin D excess.

The treatment of hypercalcemia in vitamin D intoxication consists of discontinuation of vitamin D and calcium supplementation, maintenance of low-calcium diet, and administration of a large volume of oral or IV fluids to increase calcium clearance. Once volume repletion is sufficient, a loop diuretic can be added to promote calcium excretion. Corticosteroids, in doses of 100 mg hydrocortisone per day (20 mg of prednisone per day), can also be used to decrease vitamin D-induced calcium absorption.[20] In addition, bisphosphonates have been used successfully to decrease bone resorption[21,22] and soft tissue calcification.[23] Since the 25(OH)D is stored in fat, vitamin D intoxication can have a prolonged effect lasting for weeks or months, requiring extended follow-up.

Clinical use of vitamin D preparations.—The commercially available vitamin D supplements in the United States include vitamin D_3, vitamin D_2, calcifediol or $25(OH)D_3$, calcitriol or $1,25(OH)_2D_3$, and dihydrotachysterol (DHT, a synthetic analog of a vitamin D_2) (Table 1). Many over-the-counter vitamin preparations contain 400 IU of either vitamin D_2 or vitamin D_3, which is suitable for most normal adult supplementation. More potent preparations of vitamin D are available in capsules and tablets (50,000 IU), in an oil injectable (500,000 IU/mL), or in oral solution (8,000 IU/mL). A usual dosage for patients with osteoporosis is between 1,000 to 10,000 IU per day or 50,000 IU once weekly. In contrast, a significantly higher dosage of vitamin D is required for patients with chronic renal failure, hypoparathyroidism, or pseudohypoparathyroidism, usually in the range of 50,000 to 200,000 IU per day. Calcifediol is the 25-hydroxylated form of vitamin D_3 and is available in 20 μg or 50 μg capsules. It is especially useful in treating vitamin D deficiency in patients with severe liver dysfunction who cannot metabolize vitamin D to 25(OH)D. The normal adult dosage for patients with hepatic osteodystrophy is between 20 μg to 100 μg per day and the dosage can be adjusted in four-week intervals. Calcitriol is the 1,25-dihydroxylated form of vitamin D_3 and is available in capsules (0.25 μg or 0.5 μg) and as a solution for intravenous (IV) use (1 or 2 μg/mL). It has been used in patients with chronic renal failure undergoing hemodialysis or with symptomatic renal osteodystrophy. The initial adult oral dosage is 0.25 μg daily or 0.01 μg/kg intravenously three times a week, and the dosage is adjusted by 0.25 μg at four-week intervals. Although other preparations of vitamin D such as calcifediol, 1α-hydroxyvitamin D, and DHT have all been proven to be effective in the management of renal osteodystrophy, calcitriol is the most commonly used in the United States. Additionally, calcitriol is also used in patients with hypoparathyroidism, pseudohypoparathyroidism, or vitamin D-dependent rickets in a dosage between 0.5 μg to 2 μg per day. 1α-hydroxyvitamin D_3 is not available in the United States but is widely used in Europe and Japan for patients with renal osteodystrophy. In the absence of severe liver disease, it is rapidly converted to $1,25(OH)_2D_3$ in the liver. Overall, 1α-hydroxyvitamin D_3 is as effective as calcitriol for the treatment of secondary hyperparathyroidism in patients with chronic renal failure. Dihydrotachysterol, a synthetic pseudo-1α-hydroxyvitamin D, is metabolized effectively in the liver to the biologically active 25-hydroxy-dihydrotachysterol, and does not require further renal 1-hydroxylation activation. It is available in 0.125 mg capsule, in tablets containing 0.125, 0.2, or 0.4 mg, and in solution of 0.2 mg/mL. For patients with hypoparathyroidism, DHT is initiated at 0.8 to 2.4 mg per day for several days and then maintained at 0.2 to 1 mg per day. The maintenance dose for patients with renal osteodystrophy is between 0.25 mg to 0.6 mg per day. Furthermore, vitamin D is also available in topical preparations as calcitriol (3 μg/g) in Europe and calcipotriene (50 μg/g) in Europe and the United States. It has been successfully used for the treatment of psoriasis.

Vitamin D therapy must always be accompanied by an adequate oral calcium intake, generally 1,500 mg per day of elemental calcium, provided as a combination of dairy products and calcium supplements. Vitamin D given without sufficient calcium will fail to improve bone mass and may actually lead to bone loss. In addition, a sudden increase in calcium intake could then result in hypercalcemia.

When prescribing pharmacologic doses of vitamin D (>1,000 units per day) plus calcium (1,500 mg per day), it is prudent to be certain that you are not inducing hypercalciuria or hypercalcemia. Therefore, the serum and urine calcium, as well as creatinine (24-hour collection or a morning specimen) should be checked after several weeks of therapy. In addition, when treating malabsorption syndromes and hypoparathyroidism, serial measurements of serum and urine calcium are used to monitor the adequacy of therapy.

Conclusion

Iatrogenic vitamin D intoxication is an uncommon cause of hypercalcemia. In order to produce hypercalcemia in a normal individual, one has to chronically ingest vitamin D in an excess of 50 times the normal physiologic dose (50,000 units per day).[20] If a physician mistakenly prescribes these higher dosages for otherwise healthy patients with osteoporosis, severe hypercalcemia may ensue. Proper use and understanding of the different vitamin D preparations is imperative in order to prevent complications and adequately treat patients.

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Sympathetic Schwannoma: A Case Report

ASH MOTIMAYA, M.D. AND MELIH ARICI, M.D.

ABSTRACT—Schwannomas (also known as Neurilemomas or Neurinomas) are benign tumors of the nervous system that originate in the neural sheath and most commonly occur as solitary encapsulated subcutaneous tumors in otherwise healthy individuals.[1] When they present as multiple tumors, they are histologically indistinguishable from the solitary tumors and, in such a case, they may be associated with neurofibromatosis 2 (NF2) in which the sensory roots of the cranial and spinal nerves are affected more often than the motor roots and the hallmark tumor of which is a vestibular schwannoma (also known as acoustic neuroma).[2] They also may exist as a distinct clinical entity without any stigmata of neurofibromatosis known as schwannomatosis.[1] Generally, schwannomas are less than 5 cm in diameter but sizes greater than 14 cm have been reported.[3] They present as slow growing masses and may present with pain or neurological symptoms.[4] Here we report a patient with sympathetic schwannoma who presented with right flank pain.

ABBREVIATIONS
CT = computerized tomography
AP = anterior-posterior
MRI = magnetic resonance imaging

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Case Report

A 59-year-old female presented with progressively increasing right back pain over a three-month period which was present all the time as a mild pain but became severe with twisting and any increase in activity. This pain was radiating around to her right lower quadrant, had made it difficult for her to lie flat, and was different from the chronic back pain she had in the past. Since she was distressed about this pain and the primary-care physician could not reproduce the patient's symptoms on physical examination, a computerized tomography (CT) of the abdomen and pelvis was scheduled to possibly elucidate the etiology of her pain.

CT revealed a soft tissue mass in the right paraspinal region located laterally that spanned a portion of the 11th and 12th thoracic vertebral bodies. To better evaluate this mass, postgadolinium T-1 weighted and T-2 weighted MRI images of the thoracic spine were obtained (Fig. 1 and Fig. 2). An enhancing mass in the posterior mediastinum, which was 3.1 cm in vertical height, 2.5 cm anterior-posterior (AP) dimension, and 1.5 cm transverse width, was located. A CT guided core biopsy of this mass revealed no malignant cells but contained slender wavy spindle cells with slender wavy nuclei which stained positively for S-100 protein and negatively for desmin on immunoperoxidase stain. A diagnosis of schwannoma was made. Subsequently, six weeks later, a sausage shaped tumor was excised off the sympathetic chain in the right paraspinal T11/T12 region which was histopathologically confirmed to be a schwannoma.

Discussion

The differential diagnosis of a soft tissue mass in the paraspinal region at the thoracic vertebrae level in an adult would include a neural tumor involving the sympathetic

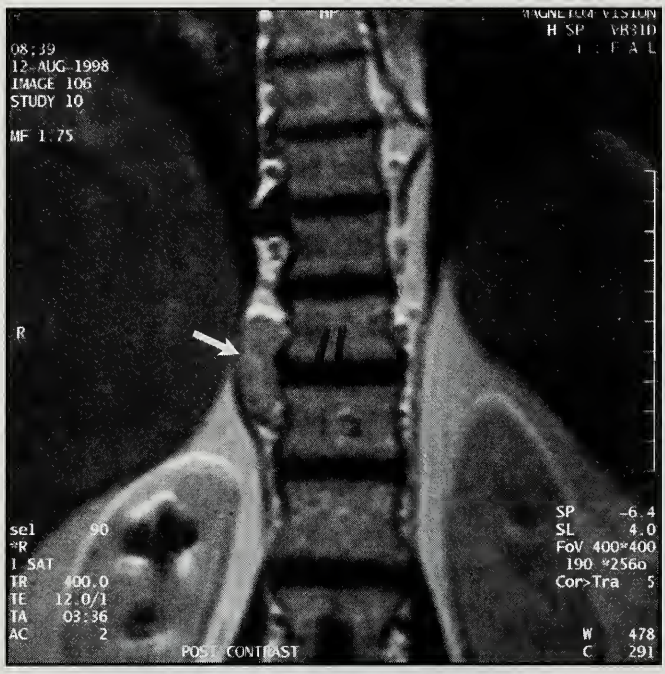

Figure 1.—Postgadolinium T1 weighted coronal image demonstrating well-circumscribed right paravertebral enhancing mass in the T11/T12 region which was histopathologically confirmed to be schwannoma.

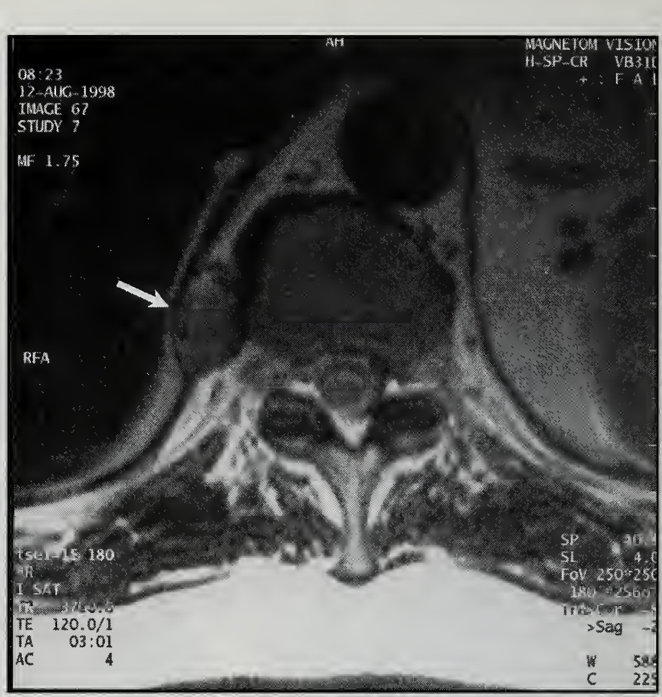

Figure 2. - T2 weighted axial image showing a sympathetic schwannoma as a well-circumscribed round right paravertebral mass with intermediate signal intensity which is separate from the right neuroforamina.

chain or tumors of the autonomic nervous system, a fibroma, and metastasis.

Schwannomas are encapsulated tumors of the neural-supportive Schwann cells that derive from migrating neural crest cells and are the innermost cells of the three compartments of the nerve sheath that wraps around the axon.[5] They are typically benign solitary tumors that are separated easily from the nerve of origin.[6] The rare malignant schwannomas arise *de novo*, may appear anywhere in the soft tissue, and differ in their distribution from the benign solitary schwannoma with two-thirds arising in the limbs and the remainder in the trunk and neck.[7] Intracranial schwannomas are approximately 8% of all primary tumors within the skull,[8] and like the intraspinal schwannomas are usually discovered in the middle decades of life with occasional childhood occurrences; this is in contrast to the peripheral schwannomas which may be found at any time in life.[7]

The main threat of schwannomas is from the pressure exerted by the larger tumors upon adjacent structures, ie, the brain stem in intracranial schwannomas, the cord in spinal schwannomas, and the intercostal nerves in peripheral schwannomas resulting in effects varying from hydrocephalus to intolerable flank pain.[7] However, since most schwannomas are benign, well delineated, and posteriorly located, they are ideally suited for surgical excision, and this makes complete resection the treatment of choice.[9]

Radiographically, schwannomas are appropriately evaluated with a contrast enhancing CT or magnetic resonance imaging 406(MRI) in which they appear as a well-circumscribed enhancing mass.[3] MRI is the best way to study schwannomas which appear bright on T2, moderately hyperintense on proton density weighted scans, and have increased signal intensity compared to muscle on postcontrast T1 weighted images.[4,10,11,12] MRI appearances of schwannomas may differ from other soft tissue tumors by the central low signal and target appearance on T2 weighted or postcontrast T-1 weighted scans and its position, ie, in the course of a spinal nerve or peripheral nerve which are important clues in its diagnosis.[4]

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An Acute Sign of Ischemic Infarction: The Hyperdense Middle Cerebral Artery

HILARIO MARTINEZ, M.D., AND FAITH WEIDNER, M.D.

ABSTRACT—Ischemic cerebrovascular accidents are a leading cause of death with significant disability common among the survivors. The hyperdense artery sign seen on computed tomography is a useful finding in the early recognition of nonhemorrhagic cerebral infarction. We report a case of a hyperdense middle cerebral artery.

CASE REPORT: A 75-year-old male presented with a sudden onset left-sided weakness. Physical examination revealed left-sided diminished muscular tone and deep tendon reflexes with drooping of the left side of the mouth and dysarthria. An axial computed tomographic (CT) study of the head was performed approximately two hours after the onset of symptoms revealing an abnormal hyperdensity of the M1 segment of the left middle cerebral artery at the level of the sylvian fissure and insula (Fig. 1). The patient was immediately admitted for thrombolytic therapy.

Discussion

Ischemic cerebral infarcts are a leading cause of death in the United States and a major source of long-term disability among survivors. Among those with an established mechanism, about two thirds are caused by thrombi and one third by emboli.[1] In a cerebral ischemic event, the early evaluation and detection of specific signs of infarction will determine the clinical evolution and prognosis of patients with acute stroke.

Of the diagnostic tests performed in patients with acute neurologic deficit, CT is the radiologic examination of choice. Although the CT images of the brain may appear normal within the first few hours after stroke, the familiarity with some of the radiologic signs of acute infarction are helpful in identifying the cause. The early diagnosis of cerebral ischemia by CT depends on the recognition of often subtle changes of reduced attenuation (loss of the insular ribbon) and slight mass effect (hemispheric sulcal effacement). A sign of cerebral infarction that may be seen often after the ictus (two to six hours)[1] is an increased density in a major cerebral artery. It can be recognized as an area of increased attenuation along the course of the first and second segments of the middle cerebral artery and represents occlusion by an intraluminal clot from a thrombus or an embolus.[2–4] The attenuation coefficient of flowing blood is linearly related to the hemoglobin concentration and the average is approximately 40 Hounsfield units (HU). In an intraluminal clot there is extrusion of serum and attenuation at CT is above 80 HU.

In some studies in patients who have stroke-related symptoms involving the MCA distribution, a substantial percentage of patients, approximately 33% to 35%, have MCA sign.[6,7] Angiographic correlation of the true-positive patients revealed a 74% correct confirmation for the CT-predicted middle cerebral artery (MCA) segment. Although the hyperdense middle cerebral artery (HMCA) sign can predict occlusion of a MCA, caution is advised since it may not represent vascular occlusion. A false sign of occlusion can be produced by high hematocrit levels which may increase the attenuation of blood, or by calcification of the vessel walls often associated with diabetes mellitus and hypertension.[8] Therefore, adherence to the criteria used to define the HMCA sign is necessary in

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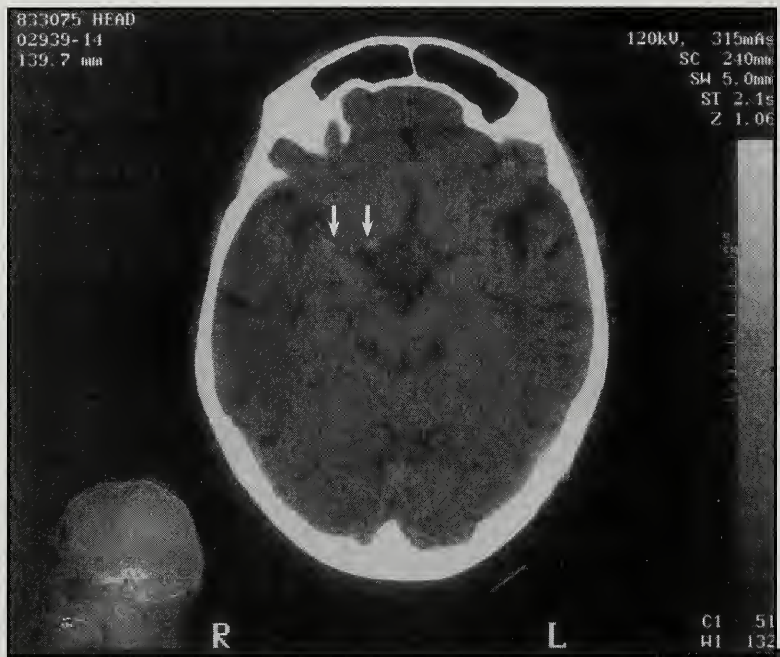
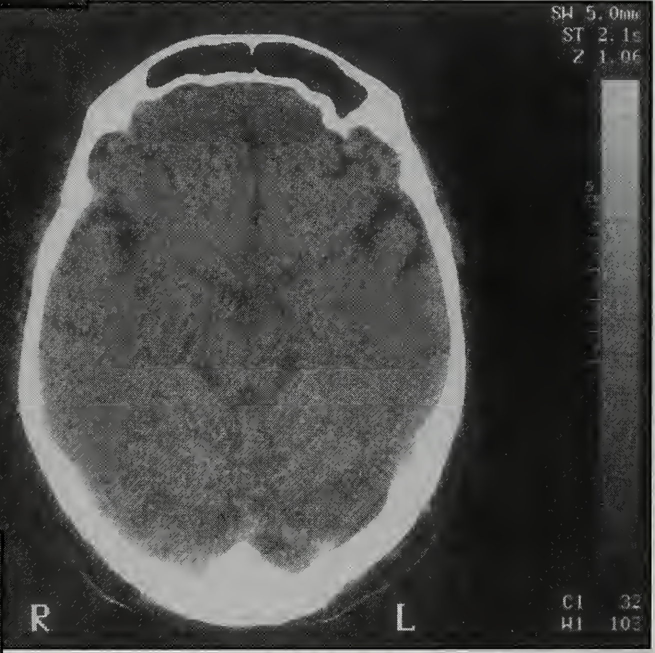


Figure 1.—Unenhanced CT scan obtained after acute onset of hemiparesis in a 75-year-old man demonstrates increased attenuation of the proximal right middle cerebral artery (arrow).

Figure 2.—Unenhanced CT scan in the same patient obtained 24 hours after thrombolytic therapy demonstrates resolution of the abnormal hyperdense right middle cerebral artery.



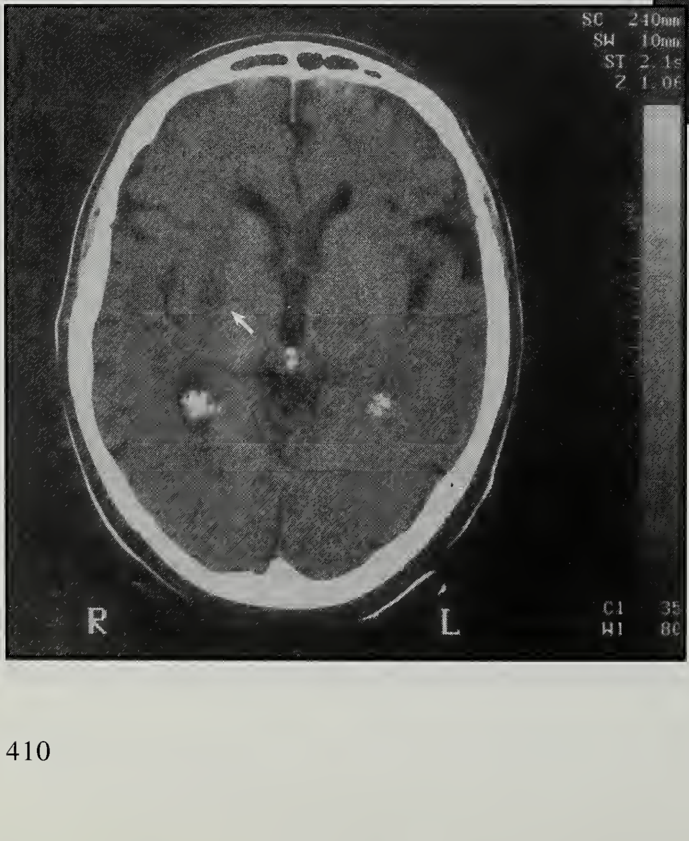


Figure 3.—A small lacunar infarct involving the region of the lentiform nucleus in the right basal is shown in this unenhanced CT scan obtained 24 hours after thrombolytic therapy. The vascular supply of this anatomic area is given by the lenticulostriate branches of the right MCA.

diagnosing MCA occlusion. Specifically, the attenuation of the ipsilateral side of the MCA must be greater in relation to the contralateral MCA and must not be caused by a high hematocrit level or calcification.

Although somewhat controversial, the HMCA sign is a strong prognostic factor in patients with early CT signs of brain infarction. It has been shown to predict a substantially worse prognosis in patients who have had strokes with this sign than patients with acute infarcts but without the HMCA sign.[6]

In conclusion, recognition of increased attenuation along the course of the MCA may be valuable in the early CT-diagnosis of ischemic infarction and in instituting an appropiate therapeutic regimen.

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PRABASHNI REDDY, PHARM.D.

Introduction

INFLIXIMAB recently received FDA approval for the treatment of moderate-severe active Crohn's disease to reduce the signs and symptoms in patients who have had an inadequate response to conventional therapy. It is also indicated in the treatment of patients with fistulizing Crohn's disease to reduce the number of draining enterocutaneous fistulae.[1]

Several cytokines, including tumor-necrosis factor alpha (TNF-α), have been implicated in the pathogenesis of inflammatory bowel disease.[2] TNF-α induces edema and granuloma formation, activates the coagulation system and is involved in the recruitment of inflammatory cells to local tissue sites of inflammation.[1,3] In Crohn's disease, increased levels of TNF-α are present in all types of cells, tissue, and secretory fluids while increased numbers of TNF-α-producing lamina propria cells have also been found. Furthermore, raised levels of soluble TNF receptors are present in active disease.[3]

Pharmacology

Infliximab (also known as chimeric monoclonal anti-tumor necrosis factor alpha antibody or cA2) is an anti-TNF-α monoclonal antibody immunoglobulin IgG_1. It is a chimer consisting of a human constant region (75%) and a murine variable portion (25%). Infliximab is produced by genetic engineering using the variable region of the immune monoclonal antibody A_2.[1,4]

Infliximab binds specifically and with high affinity to both the soluble and transmembrane forms of TNF-α, thus neutralizing the effects in vivo. Binding of TNF-β is unaffected. Treatment with infliximab reduces TNF-α levels in inflamed areas of the intestine, decreases the infiltration of inflammatory cells, and lowers interleukin-6 (IL-6) and C-reactive protein concentrations.[1] In addition, levels of FDP, von Willebrand factor, and thrombin-antithrombin III complexes have fallen to within normal limits with infliximab therapy.[5]

Infliximab may induce human antichimeric antibodies (HACA) which could potentially interfere with infliximab's biological effects due to immunoneutralization of the drug.[4]

Pharmacokinetics

Following doses between 1-20mg/kg, infliximab displayed linear pharmacokinetics. The C_{max} was 118 mcg/mL following a single 5 mg/kg intravenous dose. The volume of distribution is 3L with distribution of the drug limited to the vascular compartment. Administration of corticosteroids produced a 17% rise in this parameter, which was hypothesized to be due to fluid shifts. The elimination half-life of infliximab is 9.5 days. The pharmacokinetics are not dependent on age, gender, weight, liver, or renal function.[1]

Clinical Trials

Small, open-label studies showed promising results with respect to clinical response although the duration of remission was typically four months.[6,7] In the dose-ranging studies, at least 5 mg/kg was required to produce a clinical response.[8] These positive findings prompted the initiation of controlled studies.

Targan et al studied the effects of infliximab in patients with moderate-severe Crohn's disease in a multicenter, double-blind, placebo-controlled study.[9] Patients who received cyclosporin, methotrexate, or experimental therapies within three months before screening were excluded from the study. The Crohn's Disease Activity Index (CDAI) was used to assess disease activity. The higher the score, the greater the severity of disease. Response was defined as a reduction in CDAI by 70 points while remission was

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Table1.—Effect of Infliximab in Moderate-Severe Crohn's Disease

Clinical endpoint	**placebo (n=25)**	**5mg/kg (n=27)**	**10mg/kg (n=28)**	**20mg/kg (n=28)**	**All infliximab (n=83)**
Response					
week 4	17%*	81%	50%	64%	65%†
week 12	12%	48%	29%	46%	41%††
Remission					
week 4	4%	48%	NR	NR	33%‡
week 12	8%	30%	18%	25%	24%‡‡

*n=24, P values are placebo *vs* all: †$P<0.001$, ††$P=0.008$, ‡$P=0.005$, ‡‡$P=0.31$

defined as CDAI < 150. One hundred and eight subjects (baseline CDAI score 220–400) were randomized to receive a single dose of placebo, 5 mg/kg, 10 mg/kg, or 20 mg/kg administered over two hours. Baseline characteristics were similar between the groups although subjects assigned to placebo were more likely to have ileal disease only ($P=0.02$) and a lower level of C-reactive protein at study entry. Both response (infliximab:61% *vs* placebo:17%, $P<0.001$) and remission (infliximab:27% *vs* placebo:4%, $P=0.06$) were achieved as early as two weeks. At four weeks, significantly more patients in the active group achieved a clinical response or remission (Table 1). A dose-response relationship was not observed. Quality of life, as measured by the inflammatory bowel disease questionnaire at four weeks, improved significantly in the treatment group compared to placebo patients. C-reactive protein fell by 14.3 mg/L among the infliximab patients compared to a rise by 2 mg/L in the placebo patients ($P<0.001$). By 12 weeks, a decline in efficacy was noted with the difference in remission rates failing to maintain statistical significance.[9]

The nonresponders in this trial (n=48) were then given a second infusion of 10 mg/kg in an open-label portion of the study. At four weeks, the remission and response rates among patients previously treated with placebo (n=19) were 58% and 47%, respectively. In contrast, among subjects who received infliximab initially (n=29), the response rate was 34% ($P=0.14$ *vs* patients who received placebo initially) and the remission rate was 17% ($P=0.05$). These data suggest a diminished response with repeat dosing in nonresponders.[9]

In the third phase of the study, 73 patients who remained in remission at weeks eight were rerandomized at week 12 to receive 10 mg/kg of infliximab or placebo at weeks 12, 20, 28, and 36. At week 44, a significant difference ($P<0.05$) was observed in clinical response rates (infliximab:66% *vs* placebo:21%) and in remission rates (infliximab:51% *vs* placebo:21%) between the groups. Patients were followed until week 48, although the results at this time point were not reported.[10]

The efficacy of infliximab in fistulizing Crohn's disease was evaluated in a multicenter, double-blind, placebo-controlled study. The primary endpoint was ≥ 50% decrease from baseline in the number of draining fistulae on at least two consecutive visits, without a change in drug therapy or surgical intervention. Patients were randomized to receive 5 mg/kg, 10 mg/kg infliximab, or placebo at weeks zero, two, and six. Significantly more patients who received infliximab achieved ≥ 50% reduction in open fistulae or complete closure. A dose response relationship was not evident. The median response time was two weeks while the typical duration of response was 12 weeks.[11]

Adverse Effects

In clinical studies, discontinuation rates have been approximately 5% and were primarily due to infusion-related events or infection.[1]

Infusion-related events, including, pruritis, fever, chills, chest pain, changes in blood pressure, have occurred in 6% of placebo treated patients *vs* 16% in infliximab patients.

Table 2.—Efficacy in Fistulizing Crohn's Disease

Endpoint	**Placebo (n=31)**	**Infliximab 5 mg/kg (n=31)**	**Infliximab 10 mg/kg (n=32)**
50% closure	26%	68%¶	56%†
100% closure	13%	55%‡	38%*

¶$P=0.002$, †$P=0.02$, ‡$P=0.001$, *$P=0.04$

Table 3.— Adverse Events Occurring 10% in Crohn's Disease Trials

	Placebo n=56	Infliximab n=199
patients with ≥ 1 ADE	62.5	84.4
headache	21.4	22.6
nausea	3.6	16.6
upper respiratory tract infection	8.9	16.1
abdominal pain	3.6	12.1
fatigue	5.4	10.6
fever	7.1	10.1

A higher incidence was observed with the second dose compared to the first dose (10% *vs* 7%). Patients with positive HACA were more prone to develop these symptoms while concomitant immunosuppressive therapy provided an apparent protective effect. Infusion-related symptoms resolved on discontinuation of the drug or with treatment.[1,9] In a recent company release, 10 of 40 patients who were retreated with infliximab two to four years after the first course, developed hypersensitivity reactions. Six of these patients required hospitalization. All patients experienced symptom resolution or response within three days following treatment with standard therapy. Of note, nine of these individuals received a liquid formulation as opposed to the commercially available lyophilized product.[12]

A higher incidence of infection has been observed in patients who received infliximab compared to placebo (21% *vs* 11%).[9]

The development of antinuclear antibodies (ANA) and antidouble-stranded DNA (anti-ds DNA) antibodies has occurred during infliximab therapy. Anti-ds DNA antibodies were more likely to develop if patients were ANA positive at study entry. In contrast, the incidence was reduced if patients were receiving immunosuppressant therapy. To date, however, only two cases of a lupus-like syndrome have been reported.

HACA have developed during therapy with infliximab, with a lower incidence in patients receiving concomitant immunosuppressive agents.

Other adverse events occurring during clinical trials included headache, gastrointestinal complaints, and fatigue (Table 3).

Infliximab is labeled as a category C drug in pregnancy and should, thus, only be given if the benefits clearly outweigh the risks. The drug has not been studied in the pediatric population.[1]

Drug Interactions

To date, no studies have formally evaluated interactions between infliximab and other drugs. In clinical trials, patients were typically receiving aminosalicylates, azathioprine, 6-mercaptopurine, or antibiotics. Infusion-related reactions appear to be less common in patients receiving concomitant immunosuppressant therapy.[1]

Dosing and Administration

The recommended dose in the treatment of moderate-severe Crohn's disease is 5 mg/kg as a single intravenous infusion administered over at least two hours. In patients with fistulizing disease, this dose should be repeated at two and six weeks.

Infliximab is available in single-dose 20 mL vials containing 100mg of drug, which should be stored in the refrigerator. Following reconstitution with 10 mL sterile water, drug should be diluted with 250 mL 0.9% sodium chloride, although smaller volumes may be used. The drug is incompatible with polyvinylchloride (PVC), therefore either glass, polyolefin, or polypropylene bags should be used. During the infusion, polyethylene administration sets with an in-line sterile filter (pore size 1.2 mm) should be employed. The cost of a 100 mg vial is $585.[1]

Place in Therapy

Infliximab represents a major advance in the treatment of patients with refractory Crohn's disease by inducing remission in moderate-severe disease and by reducing the number of draining fistulae. In addition, it is a well-tolerated agent in the short-term, thereby providing an alternative option to surgery and other medical therapies. Although infliximab is an expensive therapy, it may avert the need for hospitalization. Infliximab does not have a role in the treatment of mild Crohn's disease nor has its efficacy as first-line therapy been assessed. At present, infliximab is indicated for short-term use only. However, the duration of remission is typically three months or less; thus repeated infusions may be necessary to achieve lasting remission. Further evaluation of the efficacy and toxicity in the long-term are required before infliximab can be recommended for chronic use.

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MORBIDITY AND MORTALITY WEEKLY REPORT

Nosocomial Group A Streptococcal Infections Associated with Asymptomatic Health-Care Workers —Maryland and California, 1997

GROUP A *Streptococcus* (GAS), a common cause of pharyngitis and uncomplicated skin and soft tissue infections, can cause serious invasive infections (including necrotizing fasciitis and streptococcal toxic-shock syndrome [STSS]) and death. Since 1965, at least 15 postoperative or postpartum GAS outbreaks attributed to asymptomatic carriage in health-care workers (HCWs) have been reported.[1] This report describes two nosocomial outbreaks of GAS infection in Maryland and California during 1996–1997; the findings suggest that early infection-control measures that include active surveillance may interrupt transmission and prevent morbidity and mortality.

Maryland

During July 1996–August 1997, seven patients with postpartum GAS infections were identified by hospital A. A case of GAS infection was defined as GAS isolated from any nonpharyngeal site in a patient whose symptoms began >12 hours after admission to hospital A during January 1996–September 1997. Review of the hospital's microbiology records for all nonpharyngitis GAS cultures during the study period identified two additional postpartum cases. No cases were identified on other wards. Of nine case-patients, seven had endometritis; two of these had sepsis; one developed hypotension and required admission to the intensive-care unit (ICU). One patient developed postcesarean delivery wound infection, and another had a urinary tract infection. No patients died.

Each of the nine case-patients was compared with five controls. Controls were selected randomly from patients on the obstetric ward during the study period. Exposure to one HCW(HCW A) was associated strongly with infection (odds ratio=25; 95% confidence interval=2.8-1200.0).

Swab specimens were collected and cultured from the throat, rectum, vagina, and skin of 198 HCWs who worked on the labor and delivery or postpartum wards during the outbreak period. GAS isolates from the HCWs and a patient isolate were typed by sequencing the variable portion of the M-protein gene (*emm* typing). Three HCWs had positive cultures for GAS. Only the rectal isolate from HCW A was identical to that of the case-patient (*emm* type 77). HCW A's wife, who was asymptomatic, had positive rectal and vaginal cultures for the same strain. HCW A and his wife were treated with oral vancomycin and rifampin. Surveillance cultures of HCW A have remained negative, and hospital A has had no additional cases.

California

During December 23, 1996–January 1, 1997, three patients who had surgery at hospital B developed STSS. On December 23, a previously healthy 28-year-old woman underwent a parathyroidectomy performed by surgeon A. The day before surgery, surgeon B performed direct laryngoscopy on the patient. She developed chest pain and hypotension on December 24. On December 26, she was transferred to the ICU because of respiratory distress, then developed cardiopulmonary arrest. Cultures taken December 25 from the neck wound and pleural fluid grew GAS. She went into shock and developed renal failure, coagulopathy, and purpura and died on December 29.

On December 30, a previously healthy 56-year-old woman underwent a subtotal thyroidectomy performed by surgeon A with the assistance of surgeon B. She was discharged December 31. Later that day, she was found dead in her home. Postmortem cultures of blood and tissue grew GAS. The cause of death was attributed to septicemia and GAS.

On December 30, a previously healthy 57-year-old woman underwent a subtotal thyroidectomy performed by surgeon A with surgeon B assisting. The next day she was discharged. On January 1, 1997, she sought care at the emergency department and was admitted to the ICU in shock, with acidosis, respiratory failure, renal impairment, and bilateral pleural effusions. Cultures from the surgical wound, pleural fluid, and blood grew GAS. After a hospital course including sepsis, global myocardial hypokinesis, and lower gastrointestinal bleeding, she was discharged on February 4.

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Review of hospital B's microbiology records revealed no episodes of postoperative GAS infection during the six months before the outbreak. Surgeon A was the only HCW who had contact in the operating room with all three patients. Nasopharyngeal, throat, rectal, and vaginal cultures were obtained from the 41 staff members who worked in the operating room and the pre- or postoperative areas on the days of surgery for the patients. All cultures were negative except a throat culture from one orderly that grew GAS. Surgeon A received self-initiated penicillin on January 2, before adequate cultures were obtained. Rifampin was added following adequate culturing. Throat cultures from surgeon A's household contacts were negative.

GAS isolates from all three patients were *emm* type 1 and had indistinguishable restriction fragment length polymorphism patterns. The orderly's GAS isolate was *emm* type STNS5.

Surgeons A and B were restricted from patient care until each had completed a 10-day course of penicillin and rifampin. No further postoperative GAS infection has occurred in hospital B.

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Editorial Note: GAS is an unusual cause of surgical site or postpartum infections. The bacterium is isolated from <1% of surgical-site infections[2] and 3% of infections after vaginal delivery (CDC, unpublished data, 1986–1997). The most common site of asymptomatic carriage among HCWs is the anus,[3–5] but vaginal,[6,7] skin,[2] and pharyngeal[8] carriage have been implicated. GAS carriers can shed the organism into the immediate environment despite proper gowning and gloving.[2,3,5–7] The mode of transmission is presumed to be airborne.

Surgical and obstetric patients are particularly vulnerable to infection because broken cutaneous or mucosal barriers facilitate invasive infection after exposure. In Toronto, Ontario, Canada, three of eight investigations following an episode of nosocomial GAS on surgical or obstetric wards identified an asymptomatic HCW.[9]

To prevent additional nosocomial GAS infections, enhanced surveillance and limited epidemiologic investigation are warranted following one episode cf nosocomial GAS infection on a surgical or obstetric ward. After identification of a patient with postoperative or postpartum GAS, medical and laboratory records should be reviewed to identify other infections, and isolates from infected patients should be stored and surveillance heightened to identify additional episodes. When an episode of postoperative or postpartum GAS is identified, limited HCW screening should be undertaken. Most nosocomial transmission is traced to carriers involved in direct patient care. For a postpartum GAS-infected patient, screening should include all HCWs present at the delivery and those who performed vaginal examinations before delivery. For a postoperative GAS-infected patient, screening should include all HCWs present in the operating room during the procedure and those who changed dressings on open wounds. Screening of HCWs should include culture of the nares, throat, vagina, rectum, and skin. HCWs may return to work pending culture results. Any HCW culture-positive for GAS should refrain from patient care for the first 24 hours of antimicrobial treatment. The regimen should be tailored to the carriage site; previous reports have indicated anal carriage may be difficult to eradicate.[6] For example, appropriate treatment for a positive rectal culture may be vancomycin 250 mg orally four times a day and rifampin 600 mg orally twice a day for 10 days.[3,5] For a positive throat, vaginal, or skin culture, appropriate treatment may be penicillin 500 mg four times a day for 10 days with rifampin 600 mg orally twice a day for the last four days of the 10-day course.[10]

If surveillance identifies additional patients or HCWs with positive cultures for GAS, the isolates should be typed by *emm*, serologic, or other molecular methods to identify the strain. When the isolates are the same and a carrier has not been identified, screening should be expanded to include HCWs who had less direct patient care. CDC also recommends obtaining cultures from household contacts of implicated carriers to identify and treat potential reservoirs for reinfection. Because carriage may recur,[4] implicated carriers should be monitored with periodic surveillance cultures for one year after treatment.

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Outbreaks of *Shigella sonnei* Infection Associated with Eating Fresh Parsley—United States and Canada, July-August 1998

IN August 1998, the Minnesota Department of Health reported to CDC two restaurant-associated outbreaks of *Shigella sonnei* infections. Isolates from both outbreaks had two closely related pulsed-field gel electrophoresis (PFGE) patterns that differed only by a single band. Epidemiologic investigations implicated chopped, uncooked, curly parsley as the common vehicle for these outbreaks. Through inquiries to health departments and public health laboratories, six similar outbreaks were identified during July–August (in California [two], Massachusetts, and Florida in the United States and in Ontario and Alberta in Canada). Isolates from five of these outbreaks had the same PFGE pattern identified in the two outbreaks in Minnesota. This report describes the epidemiologic, traceback, environmental, and laboratory investigations, which implicated parsley imported from a farm in Mexico as the source of these outbreaks.

United States

Minnesota.—On August 17, the Minnesota Department of Health received reports of shigellosis in two persons who ate at the same restaurant during July 24–August 17 (Fig. 1). *S. sonnei* subsequently was isolated from stool samples of 43 ill restaurant patrons; an additional 167 persons had probable shigellosis (diarrhea [three or more loose stools during a 24-hour period] lasting 23 days or accompanied by fever). Eight (18%) of 44 restaurant employees had a similar illness; five had laboratory-confirmed *S. sonnei* infection. In a case-control study of 172 ill and 95 well restaurant patrons, five items were associated with illness: water (odds ratio [OR]=1.9; 95% confidence interval [Cl]=1.0-3.8), ice (OR=3.7; 95% Cl=1.6-8.6), potatoes (OR=2.6; 95% Cl=1.5-4.6), uncooked parsley (OR=4.3; 95% Cl=2.4-8.0), and raw tomato (OR=1.9; 95% Cl=1.0-3.9). In a multivariate analysis, only uncooked parsley (OR=4.3; $P<0.01$) and ice (OR=6.9; $P<0.01$) remained significantly associated with illness.

California.—On August 5, the Los Angeles County Department of Health Services was notified of two persons with shigellosis who ate at the same restaurant on July 31. Stool samples from six ill restaurant patrons yielded *S. sonnei;* an additional three had probable shigellosis (diarrhea [three or more loose stools during a 24-hour period], or any loose stools accompanied by fever). All 27 foodhandlers denied illness and had stool samples that were negative for *S. sonnei.* In an unmatched comparison with 10 well dining companions, ill patrons were significantly more likely to have eaten foods sprinkled with chopped, uncooked parsley (OR=32.0; 95% Cl=1.8-1381.4).

Massachusetts.—On August 11, the Massachusetts Department of Health was notified of six persons who reported illness after eating at a restaurant lunch party on July 30. Stool samples from three persons yielded *S. sonnei;* an additional three had probable shigellosis (diarrhea within four days of the July 30 meal). Chopped, uncooked parsley was served on chicken sandwiches and in cole slaw served at the lunch. In a cohort study of 23 lunch attendees, illness was significantly associated with

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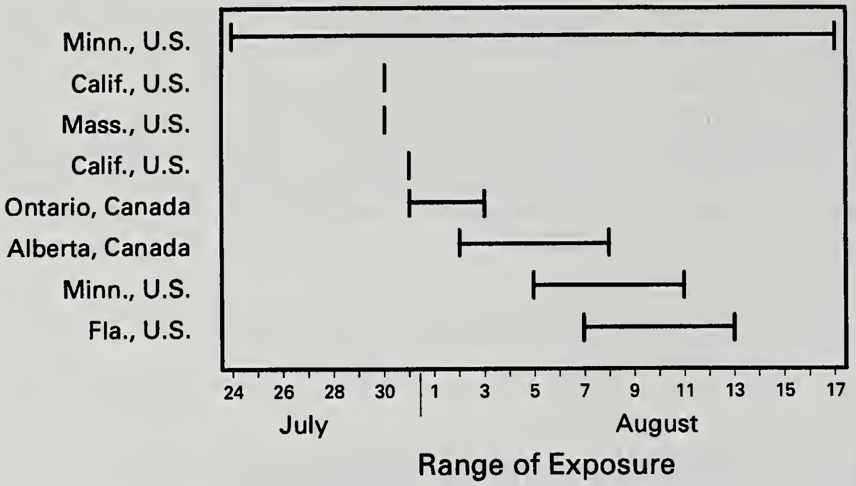

*Minnesota and California each reported two outbreaks.

Figure 1.—Range of dates of exposure for persons infected with *Shigella sonnei* in outbreaks associated with eating fresh parsley—United States* and Canada, July–August 1998.

eating chicken sandwiches (relative risk [RR]=10.0; 95% CI=2.7-37.2) or eating uncooked parsley with any item (RR=10.0; 95% CI=1.4-70.2). All restaurant employees except one submitted a stool sample for culture; all were negative for *S. sonnei.*

Canada

On August 10, the Ontario Ministry of Health was notified of a family of three persons with *S. sonnei* infection who attended a food fair during July 31–August 3. Laboratory-based surveillance identified 32 additional persons with *S. sonnei* infection who had eaten at a specific kiosk at the fair or at the restaurant that had supplied the kiosk. Of the 35 persons, 20 were questioned about food history; all reported eating a smoked salmon and pasta dish made with fresh chopped parsley. Stool samples from six (38%) of 16 foodhandlers, including the four who handled the parsley, were negative for *S. sonnei.* One child who had eaten at the kiosk was the index patient at a day care center, from which five secondary cases of shigellosis were reported.

Other Investigations

In addition to these four outbreaks, four additional restaurant-associated outbreaks of *S. sonnei* were identified, involving an additional 218 persons with culture-confirmed or probable shigellosis. Of the 111 persons interviewed, 106 (96%) reported eating chopped, uncooked, curly parsley. Isolates from three of these outbreaks (in Minnesota and California in the United States and in Alberta in Canada) matched the outbreak PFGE pattern. In the fourth outbreak (in Florida), one culture-confirmed case was identified; the isolate was not available for PFGE testing.

Traceback and Environmental Investigations

To determine the source(s) of parsley for the seven outbreaks linked by PFGE, state and provincial health departments, CDC, the Food and Drug Administration (FDA), and the Canadian Food Inspection Agency conducted traceback investigations. Farm A in Baja California, Mexico, was a possible source of parsley served in six of the seven outbreaks; four farms in California were possible sources of parsley in two to four of the seven outbreaks.

Field investigations of farm A by FDA and CDC found that the municipal water that supplied the packing shed was unchlorinated and vulnerable to contamination. This water was used for chilling the parsley in a hydrocooler immediately after harvest and for making ice with which the parsley was packaged for transport. Because the water in the hydrocooler was recirculated, bacterial contaminants in the water supply or on the parsley could have survived in the absence of chlorine and contaminated many boxes of parsley. Farm workers and village residents served by this water system reported drinking bottled water or water from other sources. Workers had limited hygiene education and limited sanitary facilities available on the farm at the time of the outbreak.

Foodhandlers at six (75%) of the eight implicated restaurants reported washing parsley before chopping it. Usually parsley was chopped in the morning and left at room temperature, sometimes until the end of the day, before it was served to customers.

Laboratory Investigations

The Minnesota Department of Health laboratory, which has tested isolates of *S. sonnei* by PFGE routinely since 1995, identified a previously unrecognized PFGE pattern of *S. sonnei* and a closely related pattern that differed by a single band associated with the two outbreaks in Minnesota. The pattern was distributed to other laboratories through PulseNet, the national molecular subtyping network for foodborne disease. In Minnesota and at CDC, strains from all seven outbreaks for which isolates were available for PFGE testing had the outbreak PFGE pattern. Isolates from the seven outbreaks were resistant to ampicillin, trimethoprim-sulfamethoxazole, tetracycline, sulfisoxazole, and streptomycin.

Investigators at the University of Georgia Center for Food Safety and Quality Enhancement conducted studies to determine the effects of temperature and handling on the growth and survival of *S. sonnei* on parsley. Colony-forming units of *S. sonnei* per gram (ctu/g) decreased by approximately 1 log per week on parsley, whether chopped or whole, under refrigeration (39 F [4 C]). In contrast, *S. sonnei* counts increased on parsley kept at room temperature (70 F [21 C]). On whole parsley, the increase was limited to 1 log cfu/g during the first one to two days, but on chopped parsley a 3 log cfu/g increase was observed within 24 hours.

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Editorial Note: *S. sonnei* is a common cause of gastroenteritis, accounting for 10,262 (73%) of the 14,071 laboratory-confirmed *Shigella* infections reported to CDC in 1996.[1] Humans and other primates are the only reservoirs for *S. sonnei,* and transmission occurs through the fecal-oral route. As few as 10–100 organisms can cause infection, enabling person-to-person transmission where hygienic conditions are compromised. In the United States, *S. sonnei* primarily infects young children and is a common cause of diarrheal outbreaks in child care centers.[2] Although reported infrequently, foodborne outbreaks of shigellosis have been associated with raw produce, including green onions,[3] iceberg lettuce,[4–7] and uncooked baby maize.[8]

Before the outbreak described in this report, PFGE was not used routinely by most state public health laboratories to subtype isolates of *S. sonnei,* making it difficult to detect clusters or outbreaks. This investigation demonstrated how the routine use of PFGE and PulseNet can link clusters of *S. sonnei* infections in widely dispersed geographic areas. This same technology is now used widely for comparing isolates of *Escherichia coli* O157:H7. CDC, in consultation with the Minnesota Department of Health, is developing a standard protocol for PFGE subtyping of *S. sonnei* isolates by PulseNet laboratories.

In the outbreak described in this report, isolates were resistant to many antimicrobial agents, including ampicillin and trimethoprim-sulfamethoxazole, which are commonly used to treat shigellosis. This highly resistant pattern is seen more frequently in countries other then the United States. During 1985–1995, antimicrobial resistance among *Shigella* increased substantially in the United States[9]: resistance to ampicillin increased from 32% to 67%, resistance to trimethoprim-sulfamethoxazole increased from 7% to 35%, and resistance to both agents increased from 6% to 19%. A history of international travel was the strongest risk factor for *Shigella* infection resistant to trimethoprim-sulfamethoxazole.[9]

The findings in this report indicate that several changes in food storage and food preparation procedures are needed. In restaurants, foodhandling practices such as pooling large batches of parsley for chopping and holding chopped parsley at room temperature increase the risk that sporadic low-level bacterial contamination will lead to outbreaks of gastrointestinal illness. When fresh produce is chopped, the release of nutrients may provide a favorable medium for bacterial growth. The risk for outbreaks can be reduced by storing chopped parsley for shorter times, keeping it refrigerated, and chopping smaller batches.[10] Changes in parsley production on the farm (eg, the use of adequately chlorinated water for chilling and icing parsley, education of farm workers on proper hygiene, and possibly the use of post-harvest control measures such as irradiation) may be necessary to ensure that produce is not contaminated with pathogens.

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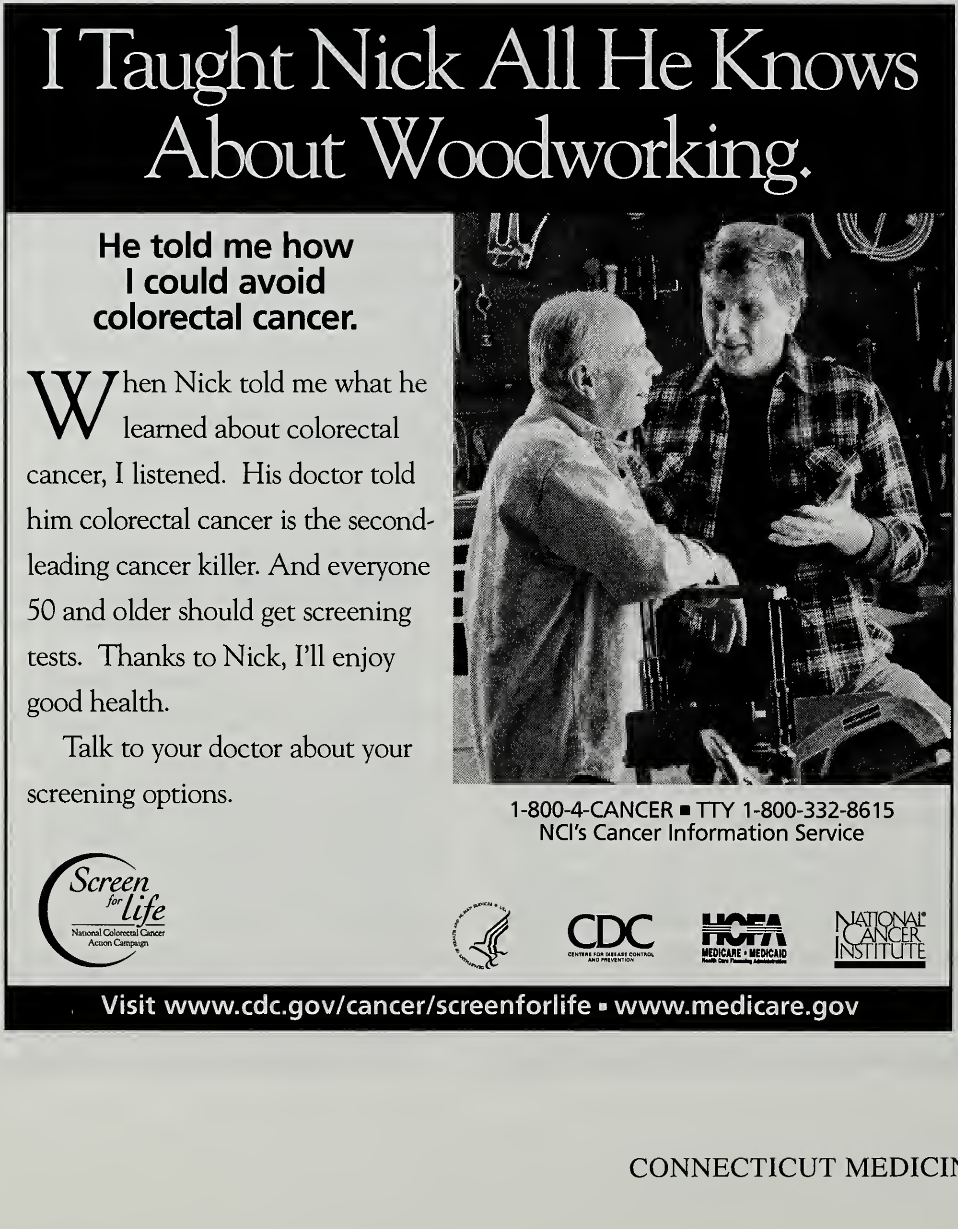

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Generic Drugs

WHEN patents expire on brand-name drugs, generic formulations become available that often cost much less. Some physicians, however, hesitate to prescribe the less expensive drug because of concerns about the quality of generic formulations (Murphy JE: *Arch Intern Med* 1999; 159:429.

SOURCES OF DRUG PRODUCTS—Comparatively inexpensive generic drug products are marketed both by generic drug companies and by manufacturers of well-known brands. Lederle, for example, markets generic alprazolam, propranolol and diazepam. Apothecon, a division of Bristol-Myers Squibb, markets many generic products, including acyclovir, diltiazem and warfarin. Some manufacturers produce both the brand-name and generic versions of the same drug; Endo, for example, manufactures both *Symmetrel* and a generic formulation of amantadine.

BIOEQUIVALENCE OF GENERICS—Generic drugs must be approved by the FDA before being marketed; drugs found to be bioequivalent to the original drug are considered therapeutically equivalent and are given an "A" rating <www.fda.gov/cder/ob/default.htm>. After a single oral dose given to at least 18 healthy human volunteers, the 90% confidence intervals for the peak serum concentration (C_{max}) and area under the plasma-concentration curve (AUC) of the generic formulation must fall within 80% to 125% of the brand-name drug. Mean AUC values are typically within about 3% of each other.

RELIABILITY OF BRAND-NAME PRODUCTS—When they are first marketed, the effectiveness and safety of new brand-name drugs have been demonstrated in clinical trials. Manufacturers frequently reformulate, however, so that the brand-name product available today may not be the same product used in the original clinical trials. The usual FDA standard for a reformulated brand-name drug is the same as it is for introduction of generics: bioequivalency tests that show 90% confidence intervals for C_{max} and AUC falling within 80% to 125% of the original.

THERAPEUTIC EQUIVALENCE—No serious therapeutic differences between brand-name originals and FDA-approved generics have been reported. In recent years, controversy about the equivalence of generics has focused on a few drugs.

Warfarin—The anticoagulant warfarin *(Coumadin*–Dupont) has recently become available in two FDA-approved generic formulations (Barr; Apothecon). Despite concerns about substitutions for drugs like warfarin with a narrow therapeutic index (Wittkowsky AK: *Pharmacotherapy* 1997; 17:640), the generics appear to be pharmacokinetically equivalent to the brand-name product and, in small clinical trials in stable patients, the Barr drug was therapeutically equivalent (Neuter JM, Smith DH: *Cardiovasc Rev Rep* February 1998; 19:49, erratum, March 1998; 19:11; Handler J, et al: *Prevent Cardiol* 1998; 1:13). Clinical trials in patients who require frequent changes in warfarin dosage are not available.

Levothyroxine—Levothyroxine is an old drug that never went through the FDA-approval process. Hyper- and hypothyroidism due to super- and sub-potency of levothyroxine formulations have occurred. Synthroid (Knoll) has had the reputation of being more reliably absorbed, but recently four generic preparations of levothyroxine were reported to be bioequivalent (Dong BJ, et al: *JAMA* 1997; 277:1205). Recalls for subpotency and superpotency of both generics and *Synthroid* have continued to occur. Now the FDA has decided to call levothyroxine a new drug, and all manufacturers will have to apply for approval.

Cyclosporine—The mainstay of therapy against organ transplant rejection, *Sandimmune,* the original brand of cyclosporine, is known to be erratically absorbed. Recently, two new products have been marketed: the manufacturer of *Sandimmune (Novartis)* introduced a modified formulation of the drug *(Neoral)* with improved oral bioavailability, and a generic formulation *(SangCya*–SangStat) was approved by the FDA. This generic formulation appears to be bioequivalent and therapeutically equivalent to *Neoral,* and both have been more consistent in bioavailability than *Sandimmune* (First MR, et al: *Clin Transplantation* 1998; 12:518; Schroeder TJ, et al: J *Clin Pharmacol* 1998; 38:807).

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Phenytoin—*Dilantin Kapseals* (Parke-Davis) is a brand-name drug that dominates the market for phenytoin despite its erratic absorption and the availability of better absorbed generic formulations. Because of phenytoin's tendency to saturate drug-metabolizing enzymes, modest changes in dosage can lead to therapeutically significant changes in plasma concentrations. *Dilantin* is considered an "extended" (-release) drug and some generic formulations of phenytoin are not; they are not interchangeable. Recently the FDA approved an "extended" generic formulation (Mylan Laboratories).

Digoxin—Digoxin is another old drug with a history of bioavailability problems that was available for many years without FDA approval. *Lanoxin* (Glaxo Wellcome) once was considered more consistent in its bioavailability than generic formulations, but inequivalence between *Lanoxin* and generic digoxin has not been reported for many years. *Lanoxin* tablets were recently (1997) approved by the FDA; now generics can seek approval as well. *Lanoxicaps* digoxin solution in a capsule, which is more bioavailable, was approved by the FDA in 1982; no generic versions are available.

Carbamazepine—Bioavailability problems have been reported with generic formulations of carbamazepine and with *Tegretol* (Novartis). Both loss of seizure control and drug toxicity have occurred after patients were switched from one to another, but cause and effect were unclear (Ores KS, Gal P: *Neurology* 1993; 43:2435). Recently a multiple-dose study demonstrated the bioequivalence of *Tegretol* and one generic formulation (Yacobi A, et al: *Clin Pharmacol Ther* April 1999; 65:389).

CONCLUSION—FDA-approved generic drugs are bioequivalent to brand-name products. Well-documented therapeutic inequivalence between brand-name and FDA-approved generic drugs has not been reported.

Improving the Care of Patients with Community-Acquired Pneumonia: A Multihospital Collaborative QI Project

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AND THOMAS P. MEEHAN, M.D.

This QI project achieved significant improvements in practice in several hospitals despite the use of two methods that have not consistently been effective—chart review and feedback of hospital process of care performance. Each hospital was free to target those processes that the hospital staff felt were most appropriate for improvement.

Article-at-a-Glance

Background: Performance of several processes of care was measured in eight acute care hospitals in Connecticut which provided inpatient treatment to 713 elderly patients with community-acquired pneumonia (CAP).
Baseline data abstraction and feedback: Chart review feedback was provided, and the hospitals were requested to design their own quality improvement (QI) interventions, after which re-examination of process of care performance was conducted.
Hospital QI interventions: Six of the eight hospitals had submitted QI plans. The quality indicators dealing with timeliness of antibiotic delivery were specifically addressed by five hospitals. However, each hospital also picked one or two other processes of care for intervention.
Results: The mean time to antibiotic administration decreased from 5.5 hours (± 0.2) to 4.7 hours (± 0.3; $P<0.0001$), and the percentage of patients who received antibiotics within four hours increased from 41.5% to 61.6% ($P<0.0001$).
Discussion: This project called for obtaining buy-in from both the clinician and administrative representatives of each hospital early in the process. In this way, the targeted processes of care were likely to have relevance for each of the participating hospitals. Education of practicing physicians and other health professionals, as the method chosen by each hospital to address delays in antibiotic administration, appears to have been successful in this project as part of a multifaceted intervention. The project also helped establish a collegial environment that has served as the basis for more ambitious pneumonia QI projects.
Summary and conclusions: Widespread improvements in process of care performance can result from hospitals' participation in a Quality Improvement Organization collaboration.

COMMUNITY-ACQUIRED pneumonia (CAP) is a frequent cause of morbidity and mortality in the elderly. Pneumonia accounted for more than 600,000 hospital discharges among elderly patients in 1993.[1] The 30-day mortality for elderly patients admitted with pneumonia is approximately 15%.[2] In 1993, Medicare spent more than $3.5 billion on the inpatient care of CAP.[3] Thus, pneumonia is an important condition among Medicare beneficiaries, and optimal care of these patients is desirable.

During the 1990s there has been increasing investigation of methods to improve the quality of care provided to patients with CAP.[4–6] With, the recent publication of evidence suggesting that process of care performance is associated with differences in mortality for patients hospitalized with CAP, these efforts assume greater importance.[2] In 1990 McGarvey and Harper published a report of a pneumonia quality improvement (QI) project in a community hospital that used a critical pathway.[4] Subsequent to adoption of the critical pathway, decreases were

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seen in mortality and resource consumption concurrent with improvement in performance of processes of care. However, critical pathways have not uniformly been successful. Weingarten et al found little difference in length of stay between patients placed on a pneumonia critical pathway and those receiving standard care.[5] Additionally, the creation and implementation of a critical pathway is time-consuming and generally affects quality of care only at a single institution.

Other methods of improving quality of care, such as chart review and feedback or physician education, may more easily be applied to multiple institutions, but generally have had limited success in improving patient care.[7,8] Providers may not agree that a proposed intervention is useful, or even whether accepting the usefulness of the intervention may be hindered from implementing the intervention by administrative barriers or time constraints.

The state Quality Improvement Organizations (QIOs), formerly called Peer Review Organizations, are funded by the Health Care Financing Administration (Baltimore) to improve the quality of health care delivered to Medicare enrollees. Generally, these efforts are expected to be conducted on a large enough scale that significant improvements can be measured among the Medicare population. Because chart review, feedback, and provider education are interventions that can be relatively easily performed on a large scale, they are often used as the basis for interventions by QIOs. This article reports a multihospital collaborative QI project in which performance of several processes of care was measured in patients hospitalized with CAP. The project was designed to allow hospitals freedom in designing their own interventions to augment the QIO intervention of audit and feedback with provider education. It was felt that this strategy was more likely to be successful than one utilizing a QIO-directed intervention alone.

Pneumonia Clinical Panel

The project was jointly organized by Qualidigm (Middletown; formerly CPRO) and the Connecticut Hospital Association (CHA; Wallingford). In February 1994 Qualidigm and CHA jointly assembled a pneumonia clinical panel from local health care professionals who provide care to patients with CAP. This panel included internists, family practitioners, and pulmonary and infectious disease specialists, as well as representatives of nursing, pharmacy, and hospital quality management. Overall, 21 of the 33 acute care hospitals in Connecticut were represented. From February through May 1994 a series of clinical panel meetings were held to promote buy-in to the study process and to establish commitment to perform interventions addressing the opportunities to improve care. Hospital administrators were also targeted to increase the likelihood of success in changing hospital health-care delivery patterns.

Qualidigm staff conducted extensive literature searches to identify processes of care that could potentially be used as quality indicators. The results were presented to the clinical panel, which identified several processes as most important and then derived the corresponding indicators:

- Time from hospital arrival to initial administration of antibiotic;
- Frequency of obtaining blood cultures within 24 hours of hospital arrival:
- Frequency of obtaining blood cultures prior to antibiotic administration;
- Frequency of oxygenation assessment within 24 hours of hospital arrival; and
- Frequency of adequate sputum collection for culture and gram stain within 24 hours of hospital arrival.

Baseline Data Abstraction and Feedback

A data abstraction instrument was created by translating the quality indicators into data elements and definitions. The instrument was tested for abstractability and reliability of each data element. When a complete set of variable definitions and abstraction instructions was finalized, an abstractor training program was developed. Throughout the data collection phase of the project—Fall 1994—a 5% random sample of records was selected and reabstracted for each abstractor. Statistical software (STATA Version 4: Stata Corp, College Station, TX) was utilized to analyze the data.

All eight hospitals that were asked to participate in this project agreed to do so. A preliminary sample of patients potentially eligible for inclusion in the study was generated from Medicare Part A claims for pneumonia discharges from each of the hospitals between January 1, 1993, and December 31, 1993. The eight participating hospitals produced an initial sample of 980 patient records based on the claims data. Inclusion and exclusion criteria used for the chart review are shown in Table 1.

The chart abstraction data elements were used to confirm the claims-based diagnosis of pneumonia and to exclude patients who had any of the exclusion criteria. After chart review, 267 (27.2%) were excluded, leaving 713 (72.8%) study set patients among the eight hospitals (range, 50–103 per hospital). The hospitals' performance with regard to the targeted quality indicators is shown in Table 2. The results relating to sputum studies are not presented, as differing methods of reporting sputum gram stains between the hospital made the chart abstraction results difficult to interpret.

Table 1.—Study Inclusion and Exclusion Criteria*

Inclusion criteria (all required)
ICD-9-CM code for pneumonia†
Age 65 years and older
Typical or atypical symptoms of pneumonia‡
Radiographic evidence of pneumonia
Exclusion criteria (presence of any of the following)
Abstracted diagnosis of HIV, AIDS, or transplant recipient
Hospitalized within previous 10 days at any acute care facility
Transferred from another acute care facility
Transferred to another acute care facility on date of admission
Preexisting unchanged CXR abnormality

*HIV, human immunodeficiency virus; AIDS, acquired immunodeficiency syndnome; CXR chest-ray.

†International Classification of Diseases, Ninth Revision, Clinical Modification codes 480.0–480.9, 481–487.0 (excluding 484), 507,0, 507,1, 507.8, 518.81.

‡Chills or sweats, fever, cough, sputum production, shortness of breath, inspiratory chest pain, vomiting, confusion, abdominal pain, anorexia, diarrhea, nausea.

During the first week of March 1995, Qualidigm sent a baseline performance report to each participating hospital and requested internal dissemination to appropriate hospital personnel. The hospitals were also asked to develop a quality improvement plan (QIP) that would identify where the hospitals perceived the greatest opportunity for improvement and delineate the planned interventions.

At a feedback session on March 28, 1995, hosted by the Connecticut Hospital Association, baseline performance results, with coded hospital identities, were presented by a Qualidigm physician [T.P.M.] to the clinical panel, and to representatives of the eight participating hospitals. In addition, a representative from each nonparticipating acute care hospital in the state was invited to attend. A follow-up letter from Qualidigm's project manager was sent to the designated Qualidigm liaison at each of the participating hospitals immediately following the feedback session. A suggested template to report progress of the QIP development process was also included. Other than this feedback, which revealed opportunities for improvement, Qualidigm provided no formal assistance or specific direction to the participating hospitals.

In addition to the face-to-face feedback session, the project's baseline performance report was mailed to each acute care hospital in the state. The recipients of this report were the QI designee and the chairpersons of medicine, pulmonary medicine, infectious diseases, emergency medicine, pharmacy, and laboratory medicine. An executive summary was also sent to each hospital's chief executive officer and vice president of medical affairs.

Each hospital was made aware that follow-up performance data would be abstracted from the records of patients admitted with CAP between April 1, 1995, and March 31, 1996. The exclusion and inclusion criteria were the same as those in the baseline data collection period.

Hospital QI Interventions

By August 1995 six of the eight hospitals had submitted a QIP to Qualidigm as requested. One of the other remaining two hospitals cited personnel changes within its QI department; the other hospital provided no explanation.

Few of the hospitals chose to focus on the blood culture or sputum quality indicators. Because of the exceedingly high rate of performance of assessment of oxygenation and treatment of hypoxia, this process of care was addressed by only one hospital. Another hospital opted not to target any individual process of care for special attention but did address multiple processes of care by creating a multidisciplinary team to develop a critical pathway for the care of patients with CAP. Ultimately, the quality indicators dealing with timeliness of antibiotic delivery were the only indicators specifically addressed by all of the five hospitals that chose to focus on specific quality indicators.

Table 2.—Baseline Pneumonia Process of Care Performance for the Eight Participating Hospitals*

	Aggregate	**Hospital Range**
Mean time to antibiotic administation (hours)†	5.5 ± 0.7	4.4–6.3
Antibiotics within 4 hours (%)	40.3	22.3–52.0
Blood culture collection within 24 hours (%)	79.9	70.5–92.2
Blood culture collection prior to antibiotic administration (%)	92.2	82.5–100
Oxygenation assessment prior to 24 hours (%)	90.6	72.0–97.1

*Zero time for all processes of care was arrival at the hospital.

†Excluding outliers > 99th percentile.

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Table 3.—Time to Initial Antibiotic Administration Before and After Improvement Interventions*

	Mean Time to Antibiotic (Hours)		Percentage Receiving Antibiotic Within Four Hours	
	Before	After	Before	After
Hospital 1	5.4	4.8	61.5	66.7
Hospital 2	5.9	5.9	34.0	38.5
Hospital 3	4.4	3.1	52.0	78.0
Hospital 4	6.3	6.8	41.0	48.9
Hospital 5	4.8	4.3	50.5	61.1
Hospital 6	6.2	3.4	22.3	68.2
Mean	5.5	4.7†	41.5	61.8‡

*Zero time for all processes of care was arrival at the hospital.
†$P < 0.0001$ by Wilcoxon rank sum test.
‡$P < 0.0001$ by chi-square test.

Each hospital had a staff member who was on the clinical panel serve as a "champion" for the QI efforts. The interventions addressing the timeliness of antibiotics were similar at each of the five hospitals, including physician and nonphysician staff education by grand rounds, departmental and administrative meetings, and a multidisciplinary team to initiate development of a pneumonia care pathway. Staff education was multidisciplinary, generally including physicians from the departments of medicine and emergency medicine, house staff, nurses, and respiratory therapists. These interventions generally occurred during the early months of 1995. Only one hospital instituted a pneumonia pathway during or before the follow-up period during the last month of data collection.

The performance on the quality indicators relating to antibiotic administration for each of the six participating hospitals before and after the intervention is shown in Table 3. The differences in timing of antibiotic administration before and after the interventions were compared using the chi-square and Wilcoxon rank sum tests. Each hospital showed improvement in at least one of the indicators, and the group showed significant improvement in both indicators. Five of the hospitals, in their reports to Qualidigm, noted the importance of delivering antibiotics in the emergency department (ED) if delays were to be avoided.

Although the quality indicators dealing with the timeliness of antibiotic delivery were the only ones addressed by all the hospitals that submitted a QIP, each hospital also picked one or two other processes of care for intervention. Feedback to one of the hospitals revealed that its system for reporting sputum gram stain results to physicians did not allow for the determination of the adequacy of the sample. In response to this finding, a new system of reporting was devised, according to which the number of polymorphonuclear leukocytes and squamous epithelial cells in the sample was quantified. If the original sample was deemed inadequate, the physician would be prompted to send another sputum sample. The hospital found that after this practice was introduced, 90% of sputum samples obtained were adequate for interpretation. Another hospital noted more frequent performance of arterial blood gas analysis than the other hospitals and frequent use of oxygen in nonhypoxemic patients. Subsequently, it reported that more frequent use of pulse oximetry—a less-invasive modality for assessing oxygenation—and an oxygen use protocol resulted in decreased utilization of those interventions.

We are also aware of two other Connecticut hospitals, not participating in this study, that developed QIPs focused on the delivery of antibiotics in the ED. The baseline data from this project, which were disseminated throughout the state, prompted these hospitals to review their pneumonia processes of care. Qualidigm was provided with detailed information regarding the steps taken by one of these nonparticipating hospitals in order to improve the quality of care provided to pneumonia patients (See Sidebar).

Discussion

During the past decade, there has been increasing research on methods to alter physician practices to improve quality of care. Common methods include education, chart review and feedback, financial incentives, and administrative methods such as chart reminders and critical pathways.[7,8] In general, educational activities, including conferences or disseminated printed materials, have been found to be relatively ineffective in influencing physician practice patterns. Similarly, reviewing physicians' practice and providing specific feedback, although occasionally effective, has often yielded disappointing results. In

SIDEBAR—CASE STUDY: TIME TO INITIAL ANTIBIOTIC ADMINISTRATION

Table—Processes Performed Prior to Antibiotic Administration at One Connecticut Hospital*

1. Patient enters emergency department and is assessed by a nurse.
2. Patient is seen by a physician.
3. Chest radiograph is performed.
4. Chest radiograph results are seen by a physician, and pneumonia is diagnosed.
5. House officer is called to admit patient.
6. House officer responds, sees the patient, and discusses with attending internist.
7. Patient is transferred to medical floor.
8. Orders are taken off chart.
9. If restricted antibiotic, clearance is obtained from infectious diseases physician.
10. Antibiotic arrives on floor.
11. If not already performed, blood and sputum samples are obtained.
12. Intravenous antibiotic is administered by nurses.

After this hospital initiated a QI project to decrease the time until antibiotic administration, step 11 was moved up to be the fifth step, and antibiotics were administered immediately after the cultures were obtained (if sputum was not obtainable, antibiotics were not delayed to allow further attempts to obtain sputum).

On receiving the baseline chart review results, this hospital's QI director performed a chart review to assess time to initial antibiotic administration. She felt that the resulting value—six hours, 16 minutes—provided significant room for improvement. At her recommendation, the hospital's senior administration set up a multidisciplinary QI team, with a charge to assess the reasons for the long delay in antibiotic administration and make suggestions for improvement. The group was cochaired by the director of pharmacy and a pulmonologist who was a member of the full-time faculty at the hospital. Other team members included a member of the division of infectious diseases, nurses from both the ED and the medical floor, a supervisor from the department of laboratory medicine, the chief medical resident, and an administrator, who served as the facilitator.

The first step of the process involved picking a benchmark. Although it was acknowledged that there were few outcome data to support a specific time by which antibiotics should be administered, it was agreed that administration of antibiotics within four hours of presentation to the ED was reasonable.

Next, the group created a flowchart, which detailed all the steps that occurred before an antibiotic was administered to a patient with CAP who was admitted through the ED (Table, above).

The flowchart and a subsequent chart review revealed that very few patients arrived on the medical floor within four hours of presenting to the ED. It was obvious that to achieve the benchmark, the group would need to recommend that antibiotics be administered while the patient was in the ED.

Although seemingly straightforward, this decision introduced a new set of concerns that needed to be addressed before any final recommendations could be made. For example, the need to obtain blood and sputum cultures before administering antibiotics resulted in a heavier workload for the ED nurses. Also, the supply of antibiotics in the ED needed to be increased. Several antibiotics commonly used for pneumonia had been on the restricted antibiotic list, which meant that the infectious diseases physician's approval needed to be obtained before the antibiotic could be used. This process, which introduced a delay in antibiotic administration, was beneficial in that it encouraged appropriate antibiotic usage—yet an alternative process was needed. Therefore, a one-page guideline was created that recommended antibiotic regimens for specific clinical situations and the recommended antibiotics were removed from the restricted list.

The infectious diseases physicians were also concerned that in the rush to administer antibiotics, sputum and blood cultures would be neglected, so recommendations for obtaining cultures were included in the guideline. Another concern was that the administration of antibiotics in the ED would take an important decision-making opportunity away from the trainees. However, the chief resident on the committee felt that the demonstration of best practice was itself a valuable lesson and that the trainees would frequently have the opportunity to readdress the choice of antibiotics when the sputum gram stain and culture results returned.

After all these concerns were addressed, the team's recommendations were disseminated at ED, department of medicine, and pharmacy department meetings. A subsequent review of the timing of antibiotic administration showed that the mean time to antibiotic administration decreased to three hours, 45 minutes.

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contrast, methods such as chart reminders and patient-directed interventions have more frequently been effective.[7,8]

Several recently published studies specifically address QI for patients with CAP. A few studies of clinical pathways or practice guidelines failed to show improvements in length of stay, costs, or outcomes related to the use of the guidelines.[5,9,10] Gottlieb and colleagues did achieve lower length of stay and costs for patients on a clinical pathway, when compared with historical controls and concurrently treated patients who were not on the pathway.[11]McGarvey and Harper also saw a decreased length of stay and lower mortality after implementation of a clinical pathway.[4]

The QI project we describe is notable for having achieved significant improvements in practice in several hospitals despite the use of two methods that have not consistently been effective. We performed chart review and feedback of hospital process of care performance, and each hospital in turn educated its physician and nonphysician personnel regarding the results. Although the degree of improvement noted in the timeliness of initial antibiotic administration was only moderate, the collaborative design of this project allowed the intervention to be effective in several hospitals, thereby multiplying its impact. In addition, the project's oversight committee—the clinical panel—included representatives from most hospitals in the state. The unsolicited communication sent to us from two nonparticipating hospitals regarding interventions that were instituted after receiving our report suggests that the project had an impact beyond what we could measure with our data.

Why was this project successful despite having been organized by institutions external to the participating hospitals, when previously reported projects using chart review and feedback or educational activities often failed?[7,8] QI efforts may fail for several reasons. Certainly, chart review and feedback may not work if the physician or organization being reviewed does not believe that the current practice pattern requires improvement. Additionally, even if convinced of the need for altering their practice, physicians may encounter administrative or other barriers that hinder their ability to change. This project's design successfully addressed these potential barriers by requiring buy-in from each hospital's clinician and administrative representatives early in the process. In this way, the targeted processes of care were likely to have relevance for each of the participating hospitals.

Education of practicing physicians and other health professionals was the method chosen by each hospital to address delays in antibiotic administration. Although education via conferences is thought to be an ineffective method of changing physician practice,[7,8] it appears to have been successful in this project as part of a multifaceted intervention. Perhaps the success was due to the fact that this education was provided along with institution-specific performance feedback, and specific recommendations, such as encouraging antibiotic administration in the ED. In addition, the educational efforts were performed with the use of some of the same techniques reported to be successful by the Cooperative Cardiovascular Project, that is, obtaining up-front physician support, identifying champions, using interdisciplinary teams, and providing both initial and follow-up data.[12]

Interestingly, the intuitive belief that timely administration of antibiotics to patients with CAP would improve outcomes was widely accepted and acted on, despite the lack of strong supportive evidence at the time this project was performed. More recently it has been shown that higher 30-day mortality rates are associated with delays in antibiotic administration.[2] Some of the six participating hospitals noted deficiencies in other processes of care on the basis of the quality indicators and instituted interventions to improve them.

The project's success may be attributed in part to each hospital's freedom to target those processes that the hospital staff felt were most appropriate, as opposed to Qualidigm's mandating a particular focus. Another aspect of this project which may have facilitated its success was that the performance data provided to the hospitals allowed for benchmarking. Staff from one of the nonparticipating hospitals that was prompted to institute its own QI intervention reported that the impetus was the discovery that their mean time to antibiotic administration was longer than those of all the participating hospitals.

Feedback to Qualidigm suggested some generally applicable factors leading to successful collaboration. One of the most important appeared to be the use of face-to-face meetings whenever possible, as opposed to telephone or mail communication. This strategy encouraged the development of personal relationships between Qualidigm staff and hospital staff, thereby facilitating collaboration. An additional incentive for several of the academically oriented physicians involved in QI work with Qualidigm has been the potential for coauthorship with Qualidigm staff of reports in peer-reviewed journals.

It is appropriate to discuss this project's limitations. First, there was no control group of nonparticipating hospitals. This issue has been noted in a previously published study of QIO projects, which found that control groups were rarely, if ever, used.[13] This may be important because of the possibility that the process improvements noted were not due to the intervention being studied. Indeed, Weingarten et al noted as much improvement in length of stay among control patients as those placed on a pneumonia critical pathway, although this was thought to be due to contamination of the control group by patient care practices derived from the critical path.[5] We know of no specific factors other than the interventions described that could have led to the improvements noted by the participating hospitals, but we cannot rule out the possibility that temporal trends played a role in our results.

The project's second limitation is that we did not collect data to show that decreasing the time to antibiotic administration actually improved the outcomes of the patients in these hospitals. Although there is strong evidence that delays in antibiotic administration are associated with increased mortality, it is unlikely that we would have been able to show improved outcomes without studying thousands of patients. This brings up the interesting question as to whether it is sufficient to show only process improvement when process outcome links are proven. In a recent focused review of influenza and pneumococcal vaccination QI projects, Qualidigm found that efforts to show improved patient outcomes were always unsuccessful, despite several projects that demonstrated large increases in vaccine delivery. On the basis of these findings, we have recommended to the Health Care Financing Administration that the QIOs not continue to expend scarce resources obtaining outcome data from vaccine related projects.[14] Instead, we suggested that improved outcomes should be accepted as an inevitable result of increased vaccination rates. Obviously, in settings where process-outcome links are less clear, outcome measurements will remain necessary.

The third major limitation is that we were dependent on each hospital's self-reporting as to what interventions it employed. Although no specific systems approaches were reported to us other than the ones detailed above, it remains possible that hospitals were not reporting back to Qualidigm all the interventions that they had used. This seems unlikely, as the few participants who did implement systems changes were proud of their accomplishments and eager to report them.

One of the project's chief benefits is that it helped establish a collegial environment that has served as the basis for more ambitious pneumonia QI projects. In December 1996 Qualidigm hosted a conference on pneumonia QI attended by representatives from 20 Connecticut hospitals. Nationally recognized leaders gave presentations and participated in small group sessions on the hospitals' experiences in pneumonia QI efforts. The conference was one of the steps leading to the initiation of a statewide pneumonia QI project, the Connecticut Pneumonia Critical Pathway Project, in which 26 (79%) of the 33 Connecticut acute care hospitals were involved. The project involved modification of an evidence-based pneumonia critical pathway for use at each of the participating hospitals, with extensive process and outcome data collection before and after initiation of the pathway at each hospital. The hospitals' willingness to engage in this labor-intensive effort, we believe, reflects Qualidigm's success in building a collegial relationship with Connecticut hospitals.

Summary and Conclusions

Widespread improvements in process of care performance can result from participation in a QIO-hospital QI collaboration. Exposure to the baseline data even prompted two nonparticipating hospitals to undertake QI interventions. Selecting the quality indicators with the input of participating providers and obtaining buy-in from administrative personnel who could encourage and facilitate changes in institution and physician practice were key success factors. Each participating hospital independently opted to facilitate rapid antibiotic delivery to patients with CAP by encouraging antibiotic delivery in the ED—an approach that has implications for many other acute medical problems.

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AMERICAN ACADEMY OF DERMATOLOGY

50 Years Ago

From *The Connecticut State Medical Journal*

July 1949

A Program of Action to Meet National Health Needs

JAMES RAGLAN MILLER, M.D., Hartford

WHEN Alice in her journey through the looking-glass remarked that it was strange considering how fast they were running that they appeared to be getting nowhere, the red queen replied, "It takes all the running you can do to keep in the same place."

None of us really wants to keep in the same place but we do have a sense of bewilderment in keeping up with the extraordinary advances of science, and particularly with the sociopolitical changes which confront us.

We may take comfort in placing our feet squarely on the ground and realizing that the laws of nature and of social behavior have not changed and when we approach a problem such as a program for the health of the nation, we know that there are three things we must do.

1. We must understand the goals which are desirable and attainable.

2. We must appraise our present position with respect to those goals.

3. We must recognize and make use of programs which are already underway.

In the light of these considerations we may draw our plans for long range action and we may also determine what can be done immediately with economy and with benefit to the greatest number.

Dr. Frank A. Calderone, director of the New York office of the World Health Organization, made the following wise observations. "The whole task falls into three natural divisions. In one group of medical problems governmental action has offered the most practical solution. This is true in making use of modern methods which are now available to combat malaria, yellow fever, kala-azar, water borne diseases, sleeping sickness, schistosomiasis, brucellosis, industrial hazards and accidents. Here is where the engineer and the public health administrator, following precepts given to them by the medical profession, can get rid of these hazards to life.

"A second group requires close cooperation between the medical profession and the government health agencies. This includes diseases such as tuberculosis, syphilis, gonorrhea, yaws, smallpox, diphtheria. It is evident here that public health organizations can aid the doctor by educating the public to cooperate in both prevention and active treatment of these diseases.

"And finally there is a group in which facilities for diagnosis, hospitalization, and the like are of great importance to the doctor. Where these facilities are supplied by government or other sources, they enable him better to apply his skills in the fields of pediatrics, obstetrics, internal medicine, surgery, metabolic disorders, developmental disorders, degenerative diseases and psychiatry. Clearly the cooperation suggested by this broad outline will take time to develop."

The problem before us, therefore, is to determine the proper relationship of public and private effort. It is natural for him to favor the predominance of public effort who sees no danger in a stronger and stronger concentration of federal power. If on the other hand local control of affairs and the highest possible development of individual responsibility is held most desirable, one is apt to prefer voluntary methods.

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Presented to the Daughters of the American Revolution at Washington, D. C., April 21, 1949.

In this day of magic drugs, of false ideas that if we spend enough money on research we can speedily find answers to our troubles, it is well to ponder a statement by Dr. William P. DeForrest, special assistant to the World Health Organization's Director-General. "It is not an easy business to teach mothers the simple things about food, cleanliness and fresh air that will save the lives of every two out of three children who now die before the age of one—to give these children injections of this or that, to spray the country with DDT is not going to do the job. Millions of families have to be taught how to live a healthy life in their homes. This requires education, patience and persistence. It is not a short-term undertaking."

Altogether too much emphasis and attention has been given to the payment of doctor's bills, as if the solution of this difficulty were the beginning and end of our health problem. The doctor's bill after all represents only one-fourth of the medical expense dollar paid by the American people, and this proportion is decreasing not increasing. So it is that in restating its program for the advancement of medicine and public health, the American Medical Association emphasized the broad front on which action must be taken. I wish to state that program and to comment briefly on each one of its points.

A FEDERAL DEPARTMENT OF HEALTH

1. Creation of a federal department of health of Cabinet status with a secretary who is a doctor of medicine, and the coordination and integration of all federal health activities under this department, except for the military activities of the medical services of the armed forces.

It has long been the aim of the Association that a Federal Department of Health should be set up. As you know the organization of the executive branch of the Government has been thoroughly studied and reported on to Congress by the Hoover Commission whose report embodies most of the desires of our Association, though it believes the time is not yet ripe for a separate Department of Health. We are interested in having a doctor of medicine who has actual experience in the care of patients sit as high as possible in the councils of such an agency and we are vitally interested, as I know you all are, in keeping health out of politics. In a broad way we are all politicians but what the doctors really mean is simply that they do not wish to have health programs put up for barter at recurring elections in exchange for votes.

MEDICAL RESEARCH

2. Promotion of medical research through a national science foundation with grants to private institutions which have facilities and personnel sufficient to carry on qualified research.

It appears now to be fairly certain that the National Science Foundation bill at present before Congress will pass and that it will be signed by President Truman. This appears to be adequate legislation.

VOLUNTARY INSURANCE

3. Further development and wide coverage of voluntary hospital and medical care plans to meet the costs of illness with extension as rapidly as possible into rural areas. Aid through the states to the indigent and medically indigent by the utilization of voluntary hospital and medical care plans with local administration and local determination of needs.

The American people have provided themselves liberally with life insurance, with insurance against losses by accident, fire and other calamities and have shown well nigh insatiable appetite for insurance against the costs of hospital and medical care. In scarcely more than a decade from small experimental beginnings over fifty-two million people are now covered by various types of insurance in this field. At the present rate of growth it seems certain that all workers and their families can be largely provided with this type of protection within the next decade.

Voluntary plans are always subject to criticism in that they do not cover broadly at first all people who wish to buy insurance, and offer all protection which many would like. Experimentation of all kinds is going on and it must be noted that under voluntary management, plans which are found to be disadvantageous can be given up promptly which is less apt to be so if they are riveted in a governmental system.

Many plans are experimenting now with coverage for house and office calls where it becomes increasingly clear that the people wish most of all to be protected against the catastrophes of expensive and long term illness. We have found it advantageous and much less expensive when we insure our cars against damage by collision if we absorb the expenses ourselves up to a given amount and obtain protection against serious or total loss. There is an interesting analogy at this point with health insurance, for in collision insurance for the automobile this mechanism of a deductible limit gets rid of small claims which are not a real burden to the individual but are disproportionately expensive to process, and consequently in the aggregate are costly. Incidentally it makes the individual realize his own responsibility to be careful if he wishes to avoid these expenses.

MEDICAL CARE AUTHORITY WITH CONSUMER REPRESENTATION

4. Establishment in each state of a medical care authority to receive and administer funds with proper representation of medical and consumer interest.

One of the outgrowths of the voluntary insurance movement is the increasing interest that physicians are taking in community life. Of necessity they are brought into contact with management and labor and with public officials. They are sitting down as producer and consumer to consider a problem which is mutual. This meeting of minds will be greatly facilitated by the development of state and local health councils. Only in this manner will plans be developed which can endure.

NEW FACILITIES

5. Encouragement of prompt development of diagnostic facilities, health centers and hospital services, locally originated, for rural and other areas in which the need can be shown and with local administration and control as provided by the national hospital survey and construction or by suitable private agencies.

Our Association is proud of the part that it played five years ago in assisting the passage of this beneficial legislation. Public Law 725 is now developing hospital and health center facilities on the basis of state determination of need. We favor all reasonable extension of funds for this purpose and favor legislation of this nature now before Congress.

PUBLIC HEALTH

6. Establishment of local public health units and services and incorporation in health centers and local public health units of such services as communicable disease control, vital statistics, environmental sanitation, control of venereal diseases, maternal and child hygiene and public health laboratory services. Remuneration of health officials commensurate with their responsibility.

For a nation which is as health conscious as ours it is shocking that we lack in so many areas the facilities furnished by a well developed, well staffed health department. Some state legislation is already present in some areas and national legislation is pending which will encourage the development of these health centers, particularly when small communities group themselves together to procure a service which they cannot singly afford. I cannot emphasize too strongly that if you as individuals are not exerting influence to procure good public health services and to see that health officials are adequately paid, you are doing less than your duty as a citizen and as you should if you are really interested in the advancement of medicine and public health.

MENTAL HYGIENE

7. The development of a program of mental hygiene with aid to mental hygiene clinics in suitable areas.

This topic would require a whole evening by itself. I have time merely to say that here particularly there is a bottleneck of lack of trained personnel. We must be careful to develop facilities only as rapidly as suitable staffs can be provided.

HEALTH EDUCATION

8. Health education programs administered through suitable state and local health and medical agencies to inform the people of the available facilities and of their own responsibilities in health care.

When a community has a trained health officer with adequate staff, and when physicians succeed in convincing the citizens of the value of a good health program and their own personal responsibility for healthy living there will be established a chain reaction of progress toward better community health which nothing can stop. Prevention of disease by developing sound health habits on an individual basis in the schools is money well invested for any community.

CHRONIC DISEASES AND THE AGED

9. Provision of facilities for care and rehabilitation of the aged and those with chronic disease and various other groups not covered by existing proposals.

"Silver Threads Among the Gold" is gaining in popularity as a theme song in public health circles though chronic illness affects all ages. The possibilities of rehabilitation are just being appreciated. It is safe to say that one half of the chronically ill are in their present condition in large measure because of ignorance, willful neglect or failure to observe and practice even the most elementary principles of hygienic living and accident prevention. It is not, as some are led to believe, primarily due to past failures in our medical facilities. *Chronic health must be earned.* It cannot be received as a gift but we can prevent much of the disability which society and the chronic invalid himself now takes for granted. This program is so vast that it must be sustained by all elements of society and all levels of government. Most of the aged and chronic invalids are not wage earners. They cannot be contributors to any scheme of compulsory or voluntary sickness insurance. They must be supported by taxation and by private philanthropy. This has not been well done in the past. We must see to it that there is developed in every state and locality a well rounded program which will not separate our senior citizens prematurely from the satisfactions of usefulness. This is the task of the Commission on Chronic Illness now being formed as a non governmental agency to coordinate public and private effort. This Commission will have its headquarters in the American Medical Association, which is one of the four sponsoring agencies. All of us must work together in this program.

VETERANS' MEDICAL CARE

10. Maintenance of existing high standards of medical care for veterans, including extension of facilities where the need can be shown and, where practicable, care of the veteran in his own community by a physician of his own choice.

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Following the first World War we had a demonstration in the Veterans' Administration of how medical care should not be given. After the second World War the reverse was true under the magnificent leadership of Generals Bradley and Hawley. The nation is now furnishing to its veterans, albeit at huge expense, excellent care for service connected disabilities and care for other disabilities when the veteran is unable to pay for it himself. Extension of this care has enabled the veteran also to be treated in his local hospital and by his own physician.

INDUSTRIAL MEDICINE

11. Greater emphasis on the program of industrial medicine, with increased safeguards against industrial hazards and prevention of accidents occurring on the highway, home and on the farm.

Among all the causes of death, accidents head the list of those affecting individuals in the productive years of life. We have gone a long way to lighten the expense of these accidents by compensation insurance and otherwise but we have scarcely begun to develop effective programs of accident prevention.

MEDICAL EDUCATION AND PERSONNEL

12. Adequate support with funds free from political control, domination and regulation of the medical, dental and nursing schools and other institutions necessary for the training of specialized personnel required in the provision and distribution of medical care.

Measures are already underway for the better utilization of personnel by the armed forces. There is general agreement that we must have more doctors, nurses and other skilled personnel. This and their better distribution is our most serious and difficult problem. Funds are needed for the support of medical education. If money is accepted from the federal or state governments it must be on terms which will preserve academic freedom and the integrity of scientific research and insulate the medical school from the arena of politics.

In outlining this program of action I believe you will agree that many of its points are already well along toward accomplishment and you will realize that the discussion of voluntary vs. compulsory sickness insurance is only a small part of the total health problem. I am convinced, however, that compulsory sickness insurance is not a good thing for the American people, for I believe it will give them a lower quality of care than they desire. The financial barrier does not seem to be insurmountable, for anyone who smokes or who goes regularly to a movie can afford to pay the premium of a voluntary health and medical care plan. I am convinced that the voluntary method should be tried out thoroughly first, and further, that government at all levels should apply itself with diligence to take better care of the people for whom they are already responsible. These would not be affected directly by compulsory sickness insurance. Finally, we should put every facility at the disposal of our public health officials and back them up with community health councils. These are immediate things which we as citizens can do.

Our neighbor to the north has a "Ministry of National Health." Its Minister, the Honorable Paul Martin, in speaking to the Royal College of Physicians and Surgeons of Canada on November 27, 1948 said that while health is of obvious national concern, it still must be regarded primarily a provincial responsibility. The centralization of administration in the hope of creating efficiency, he thought, would badly serve Canadian citizens. He charged the physicians, in closing his remarks: "It should be your concern as leaders in Canadian medicine above all else to guard against any action, whether it be by private agency or by government, that would lower the standard of medical practice. All our health programs would fail if the intangibles of medical progress, the quality of medical training, the doctor's instinct for selfless service, should in any degree be allowed to deteriorate."

Let us then turn with goodwill and industry to the many tasks which are at hand in promoting better health for our people and let us test deliberately and with great care in the crucible of human experience the programs which many thoughtful men believe would take us far down the one way road to state socialism.

FROM THE EDITOR'S DESK

Innovations a Century Apart

In this steamy final summer of the twentieth century an editor-surgeon might be permitted a brief interlude in which to take stock, with some amazement, of the "state of the art" of surgery as the new millennium approaches. Just within the decade of the 1990s, much of surgery has been transformed, diagnostically and therapeutically, by the conversion to minimally invasive techniques built upon a landscape of courage, innovation and technology. The fields of gynecology, otolaryngology, orthopedics, neurosurgery, urology, cardiothoracic and vascular surgery, transplantation, and general surgery have staked their own claims on this landscape bringing new life and new benefits to untold thousands of patients.

Only a prescient few imagined, with the advent of laparoscopic cholecystectomy early in this decade, that at its conclusion gastrointestinal surgery from esophagus to rectum would have undergone such a metamorphosis. Hiatal and paraesopageal hernias, gastric and pancreatic neoplasms, splenic, renal and adrenal lesions, inflammatory and neoplastic diseases of small and large bowel and myriad varieties of abdominal hernias have all been addressed, in whole or in part, with less invasive, less damaging, less pain-producing operations. Our surgical forebears, upon whose foundations much of this progress was built and to whom we are thereby indebted, would doubtless view all of this with awe and incredulity.

A profile of these forebears, stop-action a century ago in roughly the year 1900, yields a comparable aliquot of awe and incredulity in return. Theodor Billroth, viewed rightly as the founding father of modern general surgery, had passed on six years earlier, but his legacy endured in the hearts and efforts of those who studied with him or were influenced by his towering presence in nineteenth century surgery—Cushing, Finney, Halsted, the Mayos, and Murphy, to name a key few.

Harvey Cushing (1869–1939) was 31, serving as a resident under Halsted at Johns Hopkins. He had already demonstrated his intellect and intensity of purpose by performing resection of the Gasserian ganglion for the relief of tic douloureux, and numerous procedures for perforative typhoid of the ileum, from which a landmark paper was produced. He left Hopkins in June, 1900, for an extended and career-shaping tour of the major centers of surgical advancement in Europe.

John M.T. Finney (1863–1942), at 37, was Halsted's alter ego in Baltimore—gifted and gregarious private practitioner—counterpoint to his shy, fastidious senior academic colleague. A proponent of early surgery for acute appendicitis after Fitz' landmark paper of 1886, Finney performed surgery in his patients' homes and at the Union Protestant Infirmary. He was the stand-in for Halsted as "chief" whenever the "Professor" traveled in the states and abroad.

William S. Halsted (1852–1922) was 48, burdened in demeanor and sociability but not in surgical discipline or creativity by his narcotic addiction, had established the prototype American surgical training program, and shown the way in surgery for hernia and breast cancer. His attention at the turn of the century was focused on safe, effective operations for goiter.

The Mayo brothers, Will (1861–1939) at 39, and Charlie (1865–1939) at 35, succeeding to their father's practice and holding a vision for the future Mayo Clinic, attacked the surgical challenges of infection, and hemostasis especially in cancer and goiter with courage and innovation. They kept careful records of their surgical experiences, paving the way for a data-based surgical armamentarium. They joined with others in espousing the concept that surgeons from various North American centers might travel to each other's respective sites to demonstrate and exchange ideas and techniques in surgery. Through their collaboration with Crile, Cushing, Ochsner, and Mumford, the Clinical Surgical Society, dedicated to this purpose, was to be formally established in 1903.

John B. Murphy (1857-1916) of Chicago, at 39, was arguably the most controversial of this select group. Brave in surgical dissertation and execution but deaf and blind to the sensitivities of his peers, Murphy was already sowing the seeds which at fruition would elicit both acrimony and accolade from those peers. Suffering early condemnation or

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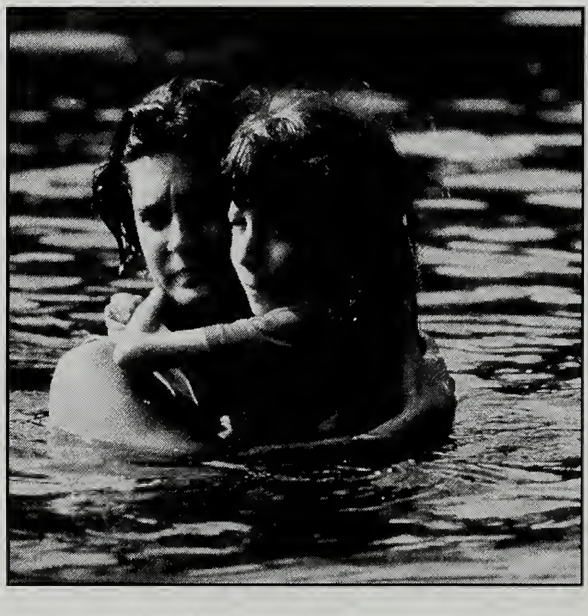
transient denial of membership by numerous professional societies for his publicity-seeking conduct, Murphy would ultimately hold the presidencies of many of them including the Chicago Medical Society, the Illinois State Medical Society, the AMA, and the predecessor of the American College Surgeons. His prodigious writings, numbering nearly 800 papers, covered a diverse surgical panorama: trauma, the biliary tract, intracranial lesions, spinal laminectomy, hip arthroplasty, the entire gastrointestinal tract, prostate, bladder, and kidney, fractures, flap reconstructions in the treatment of head and neck cancers, and therapeutic pneumothorax for tuberculosis.

This retrospective glance at surgical, thought and action of a century back, when less was known and the public was even less aware of what was known, can be humbling. As we see the rapid upward slope of the pace of change and innovation in the surgical arena of today we are reassured by its firm grounding in science and by its open and forthright exposure to public view. Somehow the quest has not been blunted, even by the vagaries of the new era of health care finance; nor have the modern counterparts of those bold and creative pioneers at the other end of the century gone into hiding.

To our forebears we give honor, to our contemporaries we give thanks and praise.

H. David Crombie, M.D.
Editor

GET IN THE SWIM



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The Amazon.com Phenomenon, and Other Current Popular Delusions

Almost everyone is familiar with the "virtual" bookstore known as Amazon.com. Indeed, I sometimes suspect that I am the only American who has not owned its stock! At the summit of its stock price this "bookstore," whose bricks and mortar seemingly amount to little more than its internet address, had a market capitalization in excess of $20 billion. This, in an industry where total sales for all book companies combined amount to less than $13 billion a year!

The cause for the stock's parabolic price rise at one particular point in time was the rumor, later proven true, that the company's gross revenues would quadruple. What was lost in all the "hype" was the plain fact that during that same period, the company's losses grew ten-fold!

When questioned about this apparent paradox, an official from Amazon.com explained that the company realized that mere book sales would limit the rapid growth that they envisioned. Sales revenues would grow much faster if they expanded into the sale of music CDs. Unfortunately, they also realized that young folks, the usual buyers of CDs, demanded "bargains" in order to buy. Amazon.com soon discovered that in order to sell to this new crowd they would have to sell their CDs below cost! Undaunted by the realities of what they were doing, they proceeded with their plan, with the results reported above. Coincidentally, the stock's price more than trebled in a month's time! I remain convinced that the latter was the real purpose of all of those machinations, not genuine growth of profits through honest commerce.

In a similar vein, around the time that Priceline.com went public it was revealed that this company was often unable to consummate the bargain sales that customers demanded. Therefore they sometimes used their own funds to surreptitiously subsidize the customer's purchases, thereby concealing price reality. No matter, declared the public. The stock soared, assuring William Shatner and others retirements far more luxurious than could ever be found aboard the Starship Enterprise!

In his book Extraordinary Popular Delusions and the Madness of Crowds, first published in 1841, Charles Mackay showed how, during the playing out of stock manias such as the one we are currently living through, these insane stock phenomena spread into all aspects of life. And indeed, we physicians have been caught up in, and, in most cases have become parties to these phenomena, through the delusion of managed care.

How? We have accepted contract after contract at prices below our true costs. We have partnered with people with whom we are truly incompatible in order to achieve some illusory savings or transient gain.

We have cut costs, but failed to realize that it is the patient's necessaries that are our costs! We have become more efficient, but forgotten that our gain in efficiency is the patient's loss of face-to-face time with us!

And we have forgotten that as with interest, so does debt compound. And that eventually, debt must be repaid. But unlike other businesses, our debt will be repaid with unnecessarily lost patient lives, and destroyed medical practices and careers. Repayments far more dear than money!

With below-cost payments, the ratio of revenue growth to business loss holds as true for medical practice as it does for Amazon.com. Medical care cannot be sold indefinitely in bulk at a loss, like so much aspirin powder in barrels being provided to generic tablet manufacturers below cost in order to book higher volume sales!

So next time you are handed a substandard contract, reject it outright. And critically examine your present managed care participation. Analyze which programs cause you outright losses, and which bring you the least income per volume of work done. If total net income from a particular contract is not a significant revenue source for you, drop that

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company! If each and every medical practice in Connecticut did this—independently and with regularity—say, every two months—we would quickly see contract revisions, if not outright company withdrawals from markets! And the pricing of medical services would soon start to once again reflect reality. Of course, that might come out of certain companies' stock prices. But that's all right. Our duty as physicians is to deal with our patients' health and welfare, not maniacal stock price supports.

In other words, start looking at the current extraordinary popular delusion called managed care with the critical analysis worthy of physicians trained in the scientific method. You will do yourselves proud. And you will serve your patients better!

> A pyramid is still a pyramid. When too much labor has been spent on pyramids there will be a crisis in daily well being, and free labor will be as helpless as slave labor was. It cannot consume what was produced. The labor that was lost cannot be recovered by unbuilding the pyramid.
>
> —John L. King, Ph.D.

Stephen R. Katz, M.D.,
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Managed Care 101

ROBERT U. MASSEY, M.D.

IN the Bulletin of the Association of American Medical Colleges last month, the feature story told of several medical schools that were now including a course on managed care in their curricula. The University of Connecticut was featured in the article.

Fifty years ago young physicians nearing the end of their residencies jokingly commented that they wished they had had a course in office management when they were in medical school. But it was mostly a joke; medical school was for teaching medicine. Anyone smart enough to get through those four years could learn all he needed to know about the business of medicine from friendly colleagues and his own mistakes. Most of us learned fairly rapidly. Those who knew they lacked entrepreneurial talent joined group practices where management types sent out the statements, looked after the books, purchased equipment and supplies, did the hiring the firing, and saw to the buildings and grounds.

Managed care may be more crabbed and knotted because it requires learning to pay tribute money to the insurance bosses while doing minimal harm to your patients, all the while keeping your shirt on your back—or finding an established group that has managed to survive without selling its soul to a bunch of stock holders. The best of all, of course, would be to become a CEO of some managed-care outfit, work for a couple of years and retire to the Virgin Islands. You could have skipped the medical school and residency years, but the doctor title did, in the end, provide you with an aura of respectability, at least to the nondiscerning multitudes.

Homer Babbidge, president of the University of Connecticut during the decade of the 1960s, the worst time ever to be a university president, once during a talk showed a cartoon of two Englishmen who had fallen waist deep into a quagmire. The caption read: "Even if it is quicksand, Gridley, I've half a mind to struggle." When I read that we are teaching idealistic medical students all about the business of corporate medicine, and how to see 30 or 40 patients a day, spend hours filling out forms, and wasting time with faceless nine-to-fivers on the phone, I wonder if we may already have decided that further struggle is vain. On the other hand, Managed Care 101 may suggest ways to arm future doctors against their enemy.

In a recent article in *The Hasting Center Report*, "What Is Left of Professionalism after Managed Care," the author, William M. Sullivan, observes that medicine risks losing its identity and must redefine or rediscover its professionalism or else forfeit the trust of its patients and its own self-respect.

> Everywhere, the claims of productivity and profitability, elevated to commanding priorities in the "market model," are reshaping professional practice in ways that threaten to obliterate any distinction between profession and business.

Karen S. Devassy, M.D., an internist in the Hartford area, writing recently in the Hartford *Courant*, describes how she must bend her practice to the policies of the HMOs and insurance companies and face quarterly ratings against her peers. Since she may be dropped from a company's roster without cause, she hesitates "to make a fuss unless it really affects [my] patient's welfare."

> I find this pressure unethical but, like so many other questionable aspects of managed care, I regret that I am becoming used to it....
>
> The life and death issues of health care, like those of our justice system, are too precious to be relegated to the marketplace.

And the marketplace, like any other place, has its rules and compelling customs, perfectly fine for pork bellies, auto repair shops, and Home Depot but not the ethos physicians should become used to. In the creed of the marketplace, according to Sullivan,

> ... the only moral obligation of any enterprise is to maximize its economic efficiency—to seek profits competitively. Thus medicine becomes "the health care industry," physicians and other health care professionals are described as employees, and patients are redefined as consumers.

Times do change, especially as technology expands its reign and populations increase. Some way for providing and paying for basic, sustainable medical care for everyone will surely evolve, but medicine, organized medicine, must have more than "half a mind to struggle" for the leading role in that evolution, at the same time holding tight to its professionalism. Sullivan defines that professionalism "as traditionally manifested in physicians' charity work; review, praise, and censure by peers; and leadership in community service."

ROBERT U. MASSEY, M.D., Professor Emeritus, Division of Humanistic Studies, Department of Community Medicine and Health Care, University of Connecticut School of Medicine, Farmington.

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This Month's Reading in Review

TIMOTHY B. NORBECK

"Congress' true intent in passing ERISA (1974) was to protect employees from unfair and unscrupulous pension administrators. However, as it turns out, the very law that was meant to protect employees has produced the unintended consequence of undercutting their ability to hold their health plan accountable for negligent medical decisions. The argument can also be made that when ERISA was enacted, the shift from a fee-for-service environment to a managed care environment among group health plans could not have been anticipated. This is significant because under traditional fee-for-service, patients were provided direct access to their physician or other health care provider and payment issues were dealt with after treatment. Today, however, health plans generally require that coverage decisions be made prior to the medical service being provided. Thus, under today's health plan structure, a denial of a claim equates to a denial of benefits, especially for those who cannot afford to pay out of their own pockets."

From testimony delivered by AMA Trustee Tim Flaherty, M.D. to a congressional committee on 20 April 1999, urging health plan accountability.

"It's interesting that when we're having this national problem with medical costs, CEOs have got their snouts so deeply in the trough."

Executive compensation expert Graef Crystal, upon finding that pay packages for top health care executives are, on average, 66% higher than that of peers across 31 other industries.
Healthcare Business (May/June 1999)

The Texas House of Representatives followed the lead of the state Senate and passed (119–20) a bill that would allow doctors to conduct collective contract negotiations with managed care plans, under the close watch of the state attorney general.... Governor George W. Bush is expected to sign it into law.

Fort Worth Star-Telegram (26 May 1999)

In Case You Were Wondering: Sometime this fall—October 12th is the best guess—the world's population will reach six billion.... The population stood at five billion 12 years ago, four billion 13 years before that. Some experts say the seven billion mark could approach even more quickly.

AP/Philadelphia Daily News (27 May 1999)

A recent survey conducted by the Center for Survey Research and Analysis at UCONN found that 85% of respondents agreed that "health insurers should be held accountable in court for health-related consequences of financial decisions."... Other findings: 67% said insurance companies should pay for vital clinical trials (22% said they should not), and 49% said they would support a national health plan (41% are satisfied with the status quo).

Hartford Courant (7 June 1999)

Health care fraud now ranks first in the number of fraud cases handled by U.S. attorneys' offices, due largely to the generous cash awards the government offers whistleblowers.

San Francisco Business Times (3 May 1999)

The Canadian government is prepared to fly as many as 1,500 patients to hospitals in Washington State and Montana if nurses in Alberta follow through on their threat to strike June 14.... Canadian health officials say their government will pick up the tab.

Spokane (WA)
Spokesman-Review (4 June 1999)

(NOTE: The nurses did start an illegal strike despite a late June 14th ruling by the Essential Service Council that ordered them back to work.)

Health care mergers and acquisitions in the first quarter of 1999 fell to their lowest levels since 1995, according to a new report.... Total transactions were 193, down from 319 a year ago.

Modern Healthcare (10 May 1999)

Only in America: Two 15-year old boys, on a break from volunteer duty in a Winston-Salem, N.C., courthouse in March as part of a sentence for vandalizing a telephone booth, were captured on surveillance videotape urinating in a coffeepot used by lawyers.... The coffeepot was left plugged in all night, creating a particularly pungent cooked-urine smell the next morning.... Said one lawyer who often uses the coffee room, "The boys are going to have to get a lawyer from out of state to defend them on this one."

AP Report and Chuck Shepherd (1 June 1999)

TIMOTHY B. NORBECK, Executive Director, Connecticut State Medical Society, New Haven.

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American Medical Accreditation Program

☆ The Connecticut State Medical Society and its affiliate, MD Advantage, together with the American Medical Association, have begun implementation of the American Medical Accreditation Program—**AMAP**^{sm} in Connecticut.

☆ In late December, Connecticut physicians were sent an introductory mailing which included the opportunity to request their personalized **AMAP**^{sm} Application Kit. **Over 800 Connecticut physicians have already requested their applications. Have you requested yours yet?**

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The Society maintains the Physician Placement Service as a *free* service to the medical profession, hospitals, and communities in Connecticut.

***Opportunities* should be typed, double-spaced copy on letterhead and submitted to CSMS, Physician Placement Service, 160 St. Ronan Street, New Haven, CT 06511 (203) 865-0587 or fax to (203) 865-4997. These will be published as space permits and will be distributed to physicians inquiring about such *opportunities*.**

***Physicians wishing to locate* in Connecticut may call the office requesting opportunities in their specialty. Also, candidates are invited to submit a resume to be kept on file with the Society. An announcement of a physician's availability will be published in two issues of *Connecticut Medicine* as space permits.**

Listing of physicians in the Placement Service does not in any way represent certification by the Society. Investigation of credentials and experience is the responsibility of those seeking applicants for positions.

Announcements on the Physician Placement Service page under Classified Advertising are charged at the regular Classified Advertising rate.

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Board certified dermatologist to work at least 3 days a week, four to five hours a day in a busy office located in Meriden, Connecticut. Please call (203) 237-1365 or fax (203) 237-8407.

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Full time physician, M.D./D.O, physiatrist, BC in internal medicine. $7,000–9,000/month. No evenings, weekends or beeper. Hard working energetic doctor for busy Shelton, Connecticut practice. Fax CV to (203) 926-1220.

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Seeking BC/BE internal medicine/family practice physician to open a practice in northcentral Connecticut. Financing available. Fax CV to (860) 684-8165.

Established internal medicine practice for sale in the Enfield area, available immediately. Call (860) 749-0205.

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Seeking BC/BE otolaryngologist to open a practice in northcentral Connecticut. Possible potential to join an existing practice. Financing available. Fax CV to (860) 684-8165.

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Sick and tired of Managed Care? We're looking for an entrepreneurial physician to join with us at the Cosmetic Laser and Vein Centers in Connecticut. Exceptional growth opportunity and no HMO's to deal with! Fax CV to: (860) 728-0768.

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Radiology practice for sale. Exceptional opportunity, Fairfield County, 1,100 square foot office condo with possibility to expand, professional office building. Ultrasound and mammography accredited. Please respond to CSMS c/o RP/MW.

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Internist/rheumatologist wanted immediately to fill untimely vacancy in five physician group in Southern Connecticut. Fax CV to: (203) 352-4663.

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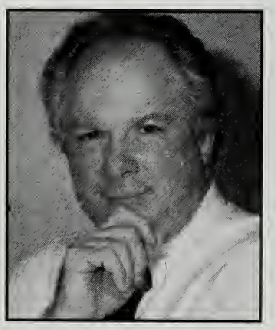

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You've Come a Long Way, Baby! Implications of the American Academy of Pediatrics' Policy on Circumcision

MARILYN R. SANDERS, M.D. AND NAVEED HUSSAIN, M.B.B.S.

> "Ordinary humanitarian sentiment prevents consideration of circumcision without anesthesia. It is perfectly true that millions of infants have been circumcised while entirely conscious, and no subsequent evil has befallen them; I do not believe, however, that any physician would rend a mother's heart by so torturing her babe. It is specious to hold that an infant's sensibilities are not sufficiently developed to perceive pain."
>
> Ferd. C. Valentine, M.D.,
> Professor of Genito-Urinary Diseases,
> New York School of Clinical Medicine
> Presented to the Section on Diseases of Children
> at the 51st Annual Meeting of the
> American Medical Association, June 5–8, 1900[1]

Introduction

EACH year, over one million newborn male infants are circumcised in the United States.[2] For much of history, the decision for or against newborn circumcision has rested upon religious and cultural considerations. Recently, the medical advisability of newborn male circumcision has been promoted, based largely upon the results of population studies, suggesting that newborn circumcision decreases the risk of urinary tract infection and cancer of the penis, both relatively infrequent conditions.[3–4] The medical evidence for and against routine newborn circumcision has been rigorously and eloquently reviewed in several recent papers.[3–6] As practicing pediatricians and neonatologists, we would like to discuss the practical implications of the recent American Academy of Pediatrics' (AAP) policy statement regarding circumcision and pain control for physicians and nurses caring for young infants and their families.

The AAP made its first policy statement regarding circumcision in 1971 when it concluded in its fifth edition of *Standards and Recommendations for Hospital Care of Newborn Infants* that "there are no valid medical indications for circumcision in the neonatal period."[7] Since then, the AAP has made three subsequent policy statements, each one of which has expanded the depth of the investigatory effort and the medical evidence supporting its conclusions. In its 1975 statement, the AAP found no basis for changing its initial statement. A small section was devoted to "surgical risks and aftermaths" which included no mention of procedure-associated pain or analgesia.[8]

In 1989, the Task Force on Circumcision, chaired by Edgar Schoen, reviewed the existing medical information and concluded that newborn circumcision prevented phimosis, paraphimosis, balanoposthitis, and decreased the incidence of cancer of the penis. The Task Force felt that the information to date on the protective effect against urinary tract infection was tentative. For the first time, the AAP discussed the "pain and behavioral changes" associated with circumcision, changes which they commented were "transient and disappear within 24 hours after surgery." Dorsal penile block with Lidocaine was mentioned as an analgesic; however, the Task Force expressed concern regarding potential complications of analgesia including hematomas, skin necrosis, and systemic Lidocaine toxicity. Because the Task Force felt that the safety of Lidocaine had not been established, they concluded "it would be prudent to obtain more data from large case-controlled series before advocating local anesthesia as an integral part of newborn circumcision."[9]

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Increasing information documents both the neuroanatomical pathways and biochemical evidence responsible for the behavioral changes observed in newborn infants undergoing stressful and/or painful procedures.[10–11] The newborn infant feels pain similar to an older child or adult for several reasons. First, the pain receptors per square meter of skin are similar. Furthermore, the peripheral sensory nerve C fibers that transmit low threshold nociceptive stimuli are unmyelinated in animals of all ages and are thus not affected by the ongoing myelination of the newborn's peripheral nerves. Finally, the chemical mediators of pain, like Substance P, are present in adequate quantities in the fetal and neonatal brain.[12] In fact, the newborn infant's ability to handle pain without analgesia/anesthesia may be limited because of a significantly lowered endogenous opioid response soon after birth and the lack of adequate development of descending inhibitory tracts in the spinal cord that help in diminishing pain signals. Moreover, there has been documentation of a development of hypersensitivity to pain stimuli in newborn infants.[13] Thus, contrary to conventional wisdom that infants feel less pain, our current understanding of neurophysiology indicates that there is heightened pain sensitivity in newborn infants.

Subsequent to the AAP recommendations in 1989, numerous studies have demonstrated the safety and efficacy of local analgesia for infants having newborn circumcision.[14–19] Having established that local analgesia is safe and effective, the latest generation of studies, including the excellent work of Kurtis and DeSilva from St. Francis Hospital in Hartford, has demonstrated that there are independent effects of instrumentation (Mogen *vs* Gomco clamps) and analgesia. The combination of the Mogen clamp with a dorsal penile nerve block (DPNB) appears to be the most effective in decreasing newborn pain and distress.[20]

It is in this context that we now view the latest statement from the AAP regarding newborn circumcision. In its most extensive and prodigious effort to date, the Task Force on Circumcision, chaired by Carole Lannon, reviewed existing epidemiological, embryological, medical, and procedural data available on newborn circumcision. The full text of the AAP statement can be obtained from the American Academy of Pediatrics web-site <www.aap.org/policy/pprgtoc.html>. Accompanying the medical data is a discussion of three analgesic methods: eutectic mixture of local anesthetics (EMLA), dorsal penile nerve block (DPNB), and subcutaneous ring block. The AAP concluded that there is insufficient medical evidence to recommend routine newborn circumcision and that "if a decision for circumcision is made, procedural analgesia should be provided."[6]

In the future, there may be regulatory and health-care standards that demand that a process exist to ensure adequate pain relief for all patients including newborn infants. First, as part of the informed consent process for any surgery, there should be a documented discussion of the anesthesia/analgesia necessary for the procedure. Recently, the Joint Commission on the Accreditation of Healthcare Organizations (JCAHO) has started using pain relief measures as a parameter by which to evaluate proper hospital practice.[22] The JCAHO has outlined the need for accurate education on pain control and standardized procedures for pain assessment and pain relief as important measures of a hospital's compliance with its standards for accreditation.

Epidemiological information suggests that obstetricians, pediatricians, and family practitioners do most hospital-based circumcisions performed in the United States. In the survey of Stang et al, obstetricians were the least likely to use local analgesia, and pediatricians, the most likely.[23] Of concern were the reasons cited for failing to use analgesia. Understandably, 54% of respondents were concerned about adverse drug effects. However, 44% of physicians who did not use analgesia felt that the "procedure does not warrant it" and 18% felt that "infants do not remember pain." Only a small number cited familiarity with the technique or time involved as deterrents.

A recent survey of residency programs suggested that about 25% of all residency-training programs which teach circumcision technique fail to provide any instruction in analgesic methods.[24] While the Ambulatory Pediatric Association includes specific teaching objectives on circumcision and pain control, neither the Council on Residency Education for Obstetrics and Gynecology nor the Program Requirements for Residency Education in Family Practice make specific training recommendations regarding analgesia and circumcision.[25–28] However, the winds are now shifting in obstetrics as prominent obstetricians are beginning to encourage the American College of Obstetrics and Gynecology to adopt a policy similar to that of the AAP.[29]

Recommendations

Professional education and in-service.—It is now left to physicians and nurses caring for newborn infants to operationalize this policy recommendation from the AAP. While pediatricians are lobbying other professional organizations for a change in circumcision policy, we can be offering education to all of our medical colleagues in recommended procedures. Some have advocated the use of EMLA cream as safe and efficacious with a rationale that it avoids the necessity of learning a new procedure. However, it is clear that DPNB and subcutaneous ring block offer superior pain relief with few to no documented complications.[17–18] The impact of educational programs to enhance awareness and provide instruction regarding analgesic techniques for circumcision has been documented.[30]

Training programs.—At the same time, it is critical to inquire who in our hospital-based training programs is instructing trainees in circumcision procedures and whether instruction in providing a DPNB/ring block is provided. There is a generation of obstetricians, pediatricians, and family practitioners training in our hospitals now—they should have the benefit of instruction during their training.[25,31-32]

Family education.—Pediatricians can increase parental advocacy by discussing circumcision during prenatal visits. We should provide a balanced and culturally sensitive discussion of the potential advantages and disadvantages of newborn circumcision and assure parents that safe, efficacious pain relief is available for newborns if they choose circumcision. We can make ourselves available to reach families through discussions in childbirth education classes since as physicians we are in the best position to discuss analgesia. We can also participate in choosing and/or adapting appropriate educational materials for families considering circumcision which discuss analgesic options so that parents are informed and can insist that their infant receive appropriate analgesia.

Hospital-based policies/protocols.—Pediatricians can participate in efforts to work with our colleagues from obstetrics, family medicine, and nursing to draft hospital-based protocols on circumcision which include both the necessity of informing parents regarding analgesia and documenting its use. Some hospitals in Connecticut have already adopted such procedures, and an excellent guideline adopted recently by St. Francis Hospital in Hartford, Connecticut follows this paper.

Ritual circumcision.—The issue of pain relief for infants having ritual circumcisions, most commonly of Judaic faith, presents a unique situation. These infants will generally be circumcised by nonphysicians and outside a hospital setting. The Mohelim who provide Judaic ritual circumcision (Brit Milah) utilize several techniques that decrease the pain of the procedure. The Mogen circumcision clamp, commonly used by Mohelim, has been shown in a recent study to be a faster and less painful method than the more commonly used Gomco clamp. By the nature of its design and that fact that a dorsal slit is not required, circumcision with a Mogen clamp takes one to two minutes to perform, compared to three to 10 minutes with the Gomco.[20] Because of the ritual requirements of the procedure, the foreskin is not dilated and retracted prior to its removal, thereby eliminating two of the most painful parts of the procedure, and thereby reducing the procedure time. The young infant also receives a wine-soaked gauze upon which he sucks.[33] The analgesic effect is probably related to the sweetness of the wine, not the alcohol content.[34]

For parents who desire additional pain relief for their sons, there are several options. A physician could potentially prescribe EMLA cream to be applied by the parents

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GUIDELINES FOR ANESTHESIA FOR CIRCUMCISION: A STANDARD OF CARE

In light of the acknowledgment by the medical community of the pain associated with circumcision, and in concert with the recently published Circumcision Policy Statement of the American Academy of Pediatrics, we propose that:

1) All neonatal circumcisions performed at St. Francis Hospital and Medical Center be performed using adequate anesthesia. We recommend the dorsal penile nerve block (DPNB), given the extensive literature supporting its efficacy and safety and its long history of use in this institution. Other acceptable methods mentioned in the AAP policy statement are the ring block of the penis and the use of EMLA cream on the foreskin.

2) Because we are recommending that anesthesia for circumcision is the standard of care, the circumcision consent form should indicate that the procedure will be performed with a local anesthetic.

3) If the Pediatric provider, following discussion with the parents, decides not to use any of the above methods of anesthesia, documentation of this discussion including parental signature indicating knowledge and acceptance of this approach should be noted on the infant's chart.

4) The Department of Pediatrics will provide instruction to any provider who requests training in the above techniques.

5) Other methods of pain control (swaddling, acetaminophen, sucrose pacifiers, etc.) should be encouraged, but should not be used in place of the above methods.

Adopted March 5, 1999

prior to the procedure. While less efficacious than a nerve or ring block, if properly applied EMLA does provide relief both during and subsequent to the procedure.[16] Sympathetic physicians may be willing to give dorsal penile nerve blocks to infants in their offices or at the home prior to circumcision by a Mohel. Courses also exist to train physicians in the ritual aspects of Brit Milah, and a number have already become certified Mohelim.

Finally, as neonatologists, we would be remiss if we failed to place analgesia for circumcision in its appropriate context of assuring adequate analgesia for all infants undergoing painful procedures in the newborn period. While we've come a long way since the dismissal of newborn pain, we've a long way to go in ensuring access to analgesia for the youngest and most vulnerable of pediatric patients.

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Rhabdomyolysis Associated with the Combined Use of Hydroxymethylglutaryl-Coenzyme A Reductase Inhibitors with Gemfibrozil and Macrolide Antibiotics

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ABSTRACT—The hydroxymethylglutaryl-coenzyme A reductase inhibitors (HMG-CoAs) are one of the most significant causes of medication induced rhabdomyolysis. The development of rhabdomyolysis is increased when the HMG-CoAs are used concurrently with certain other medications, specifically gemfibrozil and macrolide antibiotics. In this report, we describe a patient with rhabdomyolysis from the combined use of lovastatin, gemfibrozil, and clarithromycin and review the relevant literature.

Introduction

THE hydroxymethylglutaryl-coenzyme A reductase inhibitors (HMG-CoAs) are effective for the treatment of hypercholesterolemia[1] and have a proven mortality benefit among patients with coronary artery disease.[2] These medications are generally well-tolerated, with occasional side effects including headache, gastrointestinal, and musculoskeletal complaints. Severe myopathy and rhabdomyolysis is extremely rare occurring in approximately 0.04% of patients.[1] Previous reports have suggested that the development of rhabdomyolysis is increased when the HMG-CoAs are taken concurrently with gemfibrozil or macrolide antibiotics. We present a case of rhabdomyolysis in a patient on lovastatin, gemfibrozil, and clarithromycin and review the relevant literature.

Methods

We reviewed the English literature from 1987 (when lovastatin was originally marketed in the United States) to 1998 and identified reported cases of rhabdomyolysis associated with HMG-CoAs, alone and with, and either gemfibrozil or macrolide antibiotics through a computer-based Medline search. We used the following key terms: rhabdomyolysis, lovastatin, simvastatin, pravastatin, atorvastatin, gemfibrozil, erythromycin, azithromycin, and clarithromycin. Twenty-one prior case reports were identified among patients taking a combination of HMG-CoAs and gemfibrozil, and six cases were reported among patients taking both HMG-CoAs and macrolide antibiotics.

Case Report

A 57-year-old male presented to our hospital with generalized muscle weakness of two weeks duration and anuria for 14 hours. His past medical history was significant for hypertension, chronic renal insufficiency (baseline creatinine 1.7 mg/dL, eight months prior to admission), and hyperlipidemia. Medications on admission included lovastatin 40 mg daily, lisinopril, metoprolol, and hydroclorothiazide. Three weeks prior to admission the patient was started on gemfibrozil 600 mg twice daily, and was treated for a Helicobacter pylori infection with a two-week course of clarithromycin 500 mg three times daily, prevacid, and amoxicillin.

On presentation his vital signs were normal and he was noted to have profound proximal and distal muscle weakness. Laboratory tests revealed sodium 134 mmol, potassium 4.1 mmol, blood urea nitrogen 137 mg/dL, creatinine 4.5 mg/dL, creatine phosphokinase (CPK) 80,920 u/L, SGOT 1,761 u/L, SGPT 557 u/L, LDH 1782 u/L, calcium 7.4 mg/dl, magnesium 3.0 mg/dl, and phosphorus 8.7 mg/

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dl. Complete blood count, total bilirubin, alkaline phosphatase, GGT, and TSH were within the normal range.

Urinalysis was positive for myoglobin.

Based upon the history and elevated serum levels of CPK and creatinine, and myoglobinuria, diagnosis of rhabdomyolysis with acute renal failure was made. All medications other than metoprolol were held, and the patient was treated with intravenous fluid resuscitation, sodium bicarbonate, and mannitol. The creatinine increased to a peak of 7.7 mg/dL and dialysis was performed on the third and fifth hospital days. His renal function, CPK levels, muscle strength, and overall clinical condition continued to improve, and he was discharged home on the 10th hospital day.

Literature Review

HMG-CoAs and Gemfibrozil.—In 1988, Tobert reported on approximately 4,000 patients taking lovastatin who were followed for an average of 2.5 years.[2] A total of 17 (0.04%) of the patients developed myopathy, defined as myalgias or weakness with at least a 10-fold increase in CPK values. Six of the 17 patients (35%) were also taking gemfibrozil. The combination of lovastatin and gemfibrozil appeared to increase the risk of developing myopathy. Pierce, in 1990, presented 12 cases of severe myopathy and rhabdomyolysis associated with lovastatin and gemfibrozil combination therapy.[3] Additional reports of lovastatin-gemfibrozil,[4–8] as well as simvastatin-gemfibrozil,[9,10] and atorvostatin-gemfibrozil,[11] associated rhabdomyolysis have followed.

The data from the previously reported cases of rhabdomyolysis associated with the combined use of the HMG-CoAs and gemfibrozil are summarized below. The ages of the patients ranged from 42 to 79, with a mean age of 62 years. Fifteen of the 21 cases (71%) occurred in women. Diabetes mellitus was present in five of the nine patients in whom diabetic status was known. Chronic renal insuffiency was present in 8/21 (38 %) patients. The development of rhabdomyolysis does not appear to be dose related as the incidence was not increased in patients taking higher doses of either medication.

All 21 patients presented with myalgias and muscle weakness which limited daily functioning. The time course of developing rhabdomyolysis was extremely rapid with 14/20 (70%) patients becoming symptomatic within four weeks, 17/20 (85%) patients within eight weeks, and all patients within 12 weeks after combination therapy was started. Patients were diagnosed based upon the clinical history and elevated CPK levels which ranged from 1,900-317,000 u/L (mean 51,967 u/L). All patients had myoglobinuria and developed acute renal failure.

Patients were universally treated by discontinuing the medications along with general supportive care. Other documented treatment included systemic corticosteroids in two patients, and dialysis, which was performed in 3/13 patients. There were no fatalities and all patients were discharged from the hospital with improved symptoms and renal function.

HMGCoAs and Macrolide Antibiotics.—In 1988, Corpier reported a case of rhabdomyolysis associated with lovastatin, cyclosporin, and erythromycin.[12] Additional reports of rhabdomyolysis with the combined use of lovastatin and erythromycin have followed.[13–15] Recently, Gruden presented two cases of lovastatin induced rhabdomyolysis associated with clarithromycin and azithromycin.[16]

The six previous cases of rhabdomyolysis associated with the combination of lovastatin and macrolide antibiotics are summarized below. The ages of the patients ranged from 46 to 76, with a mean of 63 years. Diabetes mellitus was present in all three patients in whom diabetic status was known. Chronic renal insufficiency was present in the three patients in whom prior renal function was known. All six patients presented with muscle weakness and acute renal failure within two weeks of combination therapy with lovastatin and macrolide antibiotics. Peak CPKs ranged from 1,273 to 76,000 u/L (mean 22,615 u/L). All patients were treated by discontinuing the offending medications and intravenous fluid resuscitation. Three patients received sodium bicarbonate to alkalinize the urine. Dialysis was recommended for one patient who refused and subsequenctly died, and the remaining five patients improved.

Discussion

Rhabdomyolysis is a relatively rare disorder with the majority of cases resulting from an adverse medication effect.[16] The most significant medications are the HMG-CoAs which result in myopathy and rhabdomyolysis in a small percentage of patients. The risk of developing rhabdomyolysis appears to be significantly increased with the concurrent use of HMG-CoAs and certain medications, including gemfibrozil and macrolide antibiotics.

Rhabdomyolysis associated with the combined use of HMG-CoAs and gemfibrozil or macrolide antibiotics occurs more frequently among patients with diabetes mellitus or chronic renal insufficiency. Patients present with myalgias and muscle weakness which often limits daily functioning. The diagnosis is made by the clinical history, elevated CPK levels, and myoglobinuria. Treatment includes discontinuing the medications, intravenous fluids, and urine alkalinization. Short-term dialysis may be required. With the appropriate management, the prognosis for patients is excellent, and significant improvement or complete recovery is expected.

Combination therapy with HMG-CoAs and gemfibrozil or macrolide antibiotics should be used with caution, and a clear indication for both medications should be present before either combination is used. Patients taking combination therapy with HMG-CoAs and gemfibrozil or macrolide antibiotics should be advised to discontinue both medications at the onset of any muscle pain or weakness, and should present to their physician for appropriate laboratory testing and possible hospitilization. Since all reported cases of HMG-CoA-induced rhabdomyolysis have occurred within two weeks of combination therapy with macrolide antibiotics, and 12 weeks of combination therapy with gemfibrozil, the physician should consider following CPKs for the first three months, especially in patients with diabetes mellitus or renal insufficiency. Any signifiant elevation in CPK levels should result in an immediate evaluation for rhabdomyolysis and serious reconsideration of concurrent treatment with HMG-CoAs and either gemfibrozil or macrolide antibiotics.

Summary

Medication-induced rhabdomyolysis is reported rarely. We present a case of rhabdomyolysis associated with the combined use of lovastatin, gemfibrozil, and clarithromycin. Through a review of the English literature we found 21 cases of rhabdomyolysis associated with HMG-CoAs and gemfibrozil and six cases of rhab-domyolysis associated with HMG-CoAs and macrolide antibiotics. Although the development of rhabdomyolysis with HMG-CoAs is rare, the risk seems to increase significantlywhen HMG-CoAs are used concurrently with gemfibrozil and/or macrolide antibiotics. The number of cases of rhabdomyolysis associated with combinations of these medications likely will increase as these medications continue to be used more frequently in medical practice.

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Placental Pathologies are Not Associated with Hyperuricemia in Preeclamptic Pregnancies

INK-SIK LEE, M.D., PH.D. AND CHAUR-DONG HSU, M.D., M.P.H.

ABSTRACT—The mechanism of hyperuricemia in preeclampsia remains unknown. As the breakdown of the nuclear rich syncytiotrophoblast might result in the increased formation of uric acid from purine catabolism, the purpose of this study was to investigate whether placental pathologies were associated with hyperuricemia in preeclamptic pregnancies. We retrospectively reviewed medical reports with the availability of maternal serum uric acid levels and placental pathology reports of 83 singleton, preeclamptic pregnant women at Yale-New Haven Hospital. Preeclampsia was defined by the American College of Obstetricians and Gynecologists criteria. Hyperuricemia was defined as, at least greater than or equal to, two standard deviations of normal mean values for gestational age. The placental pathological findings include infarction, syncytial knots, abruption, intravillous thrombosis, and villous pathology (ie, edema, villitis). The relevance of hyperuricemia to the individual placental pathologic finding and the numbers of placental pathologic findings were investigated. Statistical analyses were performed using contingency table methods. We found that there was no significant correlation between hyperuricemia and individual or multiple placental pathologic findings. We concluded that placental pathologies secondary to ischemic changes may not fully explain hyperuricemia in preeclamptic pregnancies. A prospective study using morphometric measurements is needed to understand the exact role of ischemic placental damage on the maternal serum uric acid level.

Introduction

HYPERURICEMIA is one of the characteristic findings in preeclampsia. The association between elevated maternal serum uric acid and preeclamptic pregnancy was first reported in 1917.[1] Since then, many theories have been proposed to explain this relationship, however, the mechanism of hyperuricemia in preeclamptic pregnancy remains largely unknown. It is well known that preeclamptic placentas show ischemic damage to the syncytiotrophoblast layer with compensatory proliferation of the underlying cytotrophoblast layer.[2] Because uric acid is the major end product of purine metabolism, we hypothesized that the breakdown of the nuclear rich syncytiotrophoblast might result in the increased formation of uric acid from purine catabolism. To clarify our hypothesis, we performed this study.

Materials and Methods

This study was carried out retrospectively. Eighty-three medical records of singleton preeclamptic patients that had both pathologic findings and maternal serum uric acid levels available were reviewed by one of the authors (ISL). Preeclampsia was defined according to the recommended criteria of the American College of Obstetricians and Gynecologists. Hyperuricemia was defined as the maternal serum uric acid level greater or equal to two standard deviations (≥ 2 SD) of normal mean level of each gestational age.[3] We evaluated the following placental pathologic findings as independent variables for the maternal serum uric acid level: infarction, intervillous thrombi,

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Table 1.—Incidence of Hyperuricemia According to Placental Pathology

	Absence	Presence	
Placental pathology	% of HU	% of HU	*P* value
Syncytial knot	74 (28/38)	73 (33/45)	0.831
Infarction	67 (40/60)	87 (20/23)	0.102
Abruption	73 (53/73)	80 (8/10)	1.000
Intervillous thrombosis	74 (29/39)	73 (32/44)	0.935
Villous pathology	75 (11/16)	69 (11/16)	0.754

HU = hyperuricemia $P = 1.00$ by chi square

abruption, decidual necrosis, increment of syncytial knots, and villous pathology such as villitis, villous edema, and intervillous fibrin deposition. Serum uric acid levels were measured by the colorimetric uricase method using a Boeringer Mannheim/Hitachi 742/200 Analyzer (Boeringer Mannheim Corporation, Indianapolis, Indiana) at the Department of Clinical Laboratory, Yale-New Haven Hospital. We evaluated each placental finding as well as the combined placental findings on maternal serum uric acid levels. Statistical analyses were performed by means of contingency table methods. A *P* value of < 0.05 was considered statistically significant.

Results

Table 1 demonstrates the effect of individual pathologic findings on maternal serum uric acid levels. Forty-five out of 83 patients had the increment of syncytial knots in their placental pathologic findings. Twenty-eight out of 38 patients without syncytial knots increment in their placental pathologic findings showed increased serum uric acid level at least more than 2 SD of each gestational age. Thirty-three out of 45 patients with syncytial knots increment in their placental pathologic findings showed increased serum uric acid level at least more than 2 SD of each gestational age. There was no significant difference in the incidence of hyperuricemia regardless of the presence of syncytial knots increment ($P = 0.83$). Twenty-three out of 83 patients did, and 60 did not, have placental infarction in their pathologic findings. Forty out of 60 patients (67%) without placental infarction showed serum uric acid level at least more than 2 SD. Twenty out of 23 patients (87%) with placental infarction showed increased serum uric acid at least more that 2 SD. There was no significant difference in the incidence of hyperuricemia regardless of the presence of placental infarction ($P = 0.102$).

Ten out of 83 patients had pathologic findings consist with placental abruption. Fifty-three out of 73 patients (73%) without placental pathologic findings consistent with placental abruption showed increased serum uric acid levels at least more than 2 SD. Eight out of 10 patients (80%) with placental pathologic findings consistent with placental abruption showed increased serum uric acid levels at least more than 2 SD. There was no significant difference in the incidence of hyperuricemia regardless of the presence of placental abruption ($P = 1.00$).

Forty-four out of 83 patients had intervillous thrombosis in their placental pathologic findings, and 39 out of 83 patients did not. Twenty-nine out of 39 patients (74%) without intervillous thrombosis showed increased serum acid levels at least more than 2 SD. Thirty-two out of 44 patients (73%) with intervillous thrombosis showed increased serum uric acid level at least more that 2 SD. There was no significant difference in the incidence of hyperuricemia regardless of the presence of the intervillous thrombosis ($P = 0.935$). Sixteen out of 83 patients had one or more villous pathologic findings such as villitis, villous edema, and intervillous fibrin deposition. Sixty-seven out of 83 patients did not have any of these findings. Fifty out of 67 patients (75%) without villous pathologic findings showed increased serum uric acid level at least more than 2 SD. Eleven out of 16 (69%) patients with villous pathologic findings showed increased serum uric acid levels at least more than 2 SD. There was no significant difference in the incidence of hyperuricemia regardless of the presence of villous pathologic findings ($P = 0.754$). Table 2

Table 2.—Incidence of Hyperuricemia According to Numbers of Placental Pathology

Number of pathology	0 (n=19)	1 (n=22)	2 (n=25)	≥3 (n=17)
Hyperuricemia (%)	13/19 (68)	17/22 (77)	18/25 (72)	13/17 (76)

shows that the combined effect of the above placental pathologic findings on maternal serum uric acid levels. Similarly, there are no significant differences in the incidence of hyperuricemia regardless of the number of pathologic findings.

Discussion

The mechanism that causes hyperuricemia in preeclampsia remains unknown. The proposed hypotheses include: 1) increased reabsorption and decreased excretion of uric acid in the proximal tubules,[4] 2) increased production of uric acid and altered renal excretion,[5,6] 3) increased placental damage,[7] and 4) xanthine oxidase activity.[8] Our study focused on the possibility of damaged placental tissue as a source of increased uric acid in preeclampsia. Although a wide variety of morphologic changes have been reported in the placentas of preeclamptic women, no placental lesion is specific to preeclampsia. However, certain changes are more extensive than normal including syncytial sprouts, proliferation of the cytotrophoblast, thickening of the trophoblastic basement membrane, infarction, and retroplacental hematoma.[9] Various villous lesions reported on a morphometric basis are significant reduction in villous and capillary surface area,[10] in the intervillous space volume,[10] and in the mass of syncytio-trophoblast.[11] Placentas from preeclamptic pregnancies show ischemic damage to the syncytiotrophoblast layer with compensatory proliferation of the underlying cytotrophoblast layer.[2] Ischemic damage of the syncytiotrophoblast layer may result in the increased formation of uric acid from purine metabolism.[7]

Under this consideration, we investigated the effect of various placental pathologic findings on maternal serum uric level. We used the serum uric acid level at least more than 2 SD of normal mean value with each gestational age as a definition of hyperuricemia.[3] There was no significant difference in the incidence of hyperuricemia regardless of individual number(s) of pathologic findings. Although we further lowered our defined level of hyperuricemia to at least more than 1 SD of normal mean value with each gestational age, we still could not find significant difference in the incidence of maternal hyperuricemia and individual or number(s) of pathologic findings.

There are several possible explanations for our results. First, our sample size may not be large enough to detect the effect of pathologic lesions on the incidence of maternal hyperuricemia. Second, the placenta pathologic findings that we used might not reflect the extent of ischemic damage of placenta. Third, the extent of pathologic lesions might not be extensive enough to increased maternal serum uric acid. Most of the patients with placental infarction in this study had infarcts no more than 5% of the placental weight. Because the destruction of placental tissue was not so extensive, uric acid from the destruction of trophoblastic cells might contribute little to increased maternal serum uric acid.

There are some limitations in our study, first, with a retrospective study we could not measure the extent of pathologic lesions. This would allow for better correlation with maternal serum uric acid level. Second, several pathologists were involved in this study. It is possible that the same terminology was used to describe different findings or different terminology was used to describe the same findings. Despite some drawbacks in this study, our results suggested that ischemic placental damage did not play an important role in the increment of maternal serum uric acid in preeclampsia.

Further prospective study using morphometric measurements is needed to understand the exact role of ischemic placental damage on the maternal serum uric acid level.

Synopsis

Placental pathologies did not correlate with hyperuricemia. Placental pathologies due to hypoxic changes could not fully explain hyperuricemia in preeclampsia.

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Fatalities from Occupational Diseases in Connecticut

TIM MORSE, Ph.D. AND EILEEN STOREY, M.D., M.P.H.

ABSTRACT—Occupational diseases in Connecticut were identified using reports to the Workers' Compensation Commission, Connecticut OSHA, Vital Statistics, and the Tumor Registry. There were 93 identified fatalities from occupational disease in 1995, and 90 in 1994, approximately three times the number of traumatic occupational fatalities. Identified fatalities were predominantly from asbestos-related diseases, including mesothelioma and asbestosis. Most occupational diseases are not readily identifiable with current reporting mechanisms. Based on national estimates, these figures are considered to be an underestimate of the true burden of occupational disease. Increased awareness and reporting of occupational diseases is needed to properly identify and prevent these common conditions.

Introduction

REPORTS of occupational fatalities typically focus on the important and compelling traumatic deaths from falls, electrocutions, vehicle accidents, violence, and trench cave-ins, which account for approximately 30–40 fatalities each year in Connecticut (Connecticut Department of Labor, 1995; U.S. Labor Dept, OSHA, 1998). However, recent studies have indicated a potentially larger concern for occupational diseases (Landrigan and Baker, 1991; Leigh et al, 1997). Nationally, Leigh estimates 60,300 occupational disease fatalities, almost 10 times the number of traumatic fatalities.

National estimates of occupational disease rely to a large extent on projections from epidemiological studies, which are then used to generate a percentage multiplier of total deaths by cause. Such estimates are necessary since there is no reliable data-gathering system for occupational disease, particularly chronic and multifactorial diseases such as cancer or heart disease. There is also a need for a more accurate assessment of the minimum number of individually identifiable occupational disease fatalities. Although such a figure is almost certainly an underestimate, it provides a basis for prioritization of occupational disease in comparison to other causes of death.

How extensive is the problem of fatal occupational disease in Connecticut? This study provides a minimum estimate based on recorded cases of occupational disease, utilizing multiple sources for reports of diseases that are known to be primarily occupational in origin. These sources include Connecticut OSHA's Census of Fatalities from Occupational Injuries (CFOI), Connecticut Workers' Compensation Commission reports, Vital Statistics death certificates, and the Connecticut Tumor Registry.

The Census of Fatalities from Occupational Injuries (CFOI) is designed to obtain information primarily on occupational traumatic fatalities, and does not make a concerted effort to obtain occupational disease reports, but retains disease reports when discovered. CFOI utilizes multiple sources including OSHA, police, and newspaper reports.

Workers' Compensation does not receive reports on all occupational fatalities, but only for those people that file for compensation benefits. This in turn depends on the probability of successfully proving work relatedness, which

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is particularly difficult in chronic diseases with long latency periods and multiple potential causes, such as lung cancer and heart disease. In addition, workers at a shipyard in the state that had extensive asbestos exposure had the choice of coverage by either the state system or the federal longshore system, and so may not report to the state system.

Workers' Compensation data include "heart disease and hypertension" cases which are legally defined as being work related for certain classes of police and firefighters. For the years under consideration, these were "nonrebuttably presumed" to be work related. If they occurred in the covered population, they were considered to be work related even if in the individual case, there may have been few work risk factors and many nonwork risk factors. This subcategory can be identified through occupational coding, and comprises only a small minority of heart conditions reported to workers' compensation.

Vital Statistics is a section of the Connecticut Department of Public Health which maintains birth and death certificates. They include data on immediate and underlying causes of death for all deaths that occur in the state.The Connecticut Tumor Registry records and verifies cancer diagnoses for incident cases in Connecticut.

Methods

Occupational disease fatality data were obtained from several sources:

- The Connecticut Workers' Compensation Commission.
- The Connecticut OSHA (Occupational Safety and Health Administration) CFOI (Census of Fatalities from Occupational Injuries).
- The Vital Statistics branch of the Connecticut Department of Public Health (DPH) for fatalities from the occupationally-dominated categories of pneumoconioses (scarring of the lungs from asbestos, silica, coal dust, etc.) and mesothelioma (a cancer of the lining of the lung due to asbestos exposure).
- The Connecticut Tumor Registry for cases of mesothelioma.

All fatalities reported to Workers' Compensation and CFOI were divided into acute traumatic events (not analyzed further) and occupational diseases.

The only conditions drawn from the Vital Statistics branch of DPH were mesothelioma, and pneumoconioses including asbestosis, silicosis, Black Lung (coal dust), Brown Lung (cotton dust), and chemical pneumoconiosis. The Tumor Registry tracks and verifies incident reports of cancer in Connecticut, and all cases of mesothelioma were obtained. Although the Tumor Registry includes nonfatal cases, mesothelioma is almost inevitably fatal.

Other occupational cancers were not assessed, unless they were filed under workers' compensation, even though it is expected that other tumors such as lung cancer may indeed be occupation related.

Individual identifiers (usually names) were obtained for all cases, with duplicates from multiple data sources eliminated. Names were hand-evaluated to ensure matches even with misspelled names. Where there were different causes of death listed from different sources, medical sources (Tumor Registry, Vital Statistics) were given preference for categorization. More specific causes (for example, "mesothelioma" instead of "asbestos-related") were used for categorization if different terms appeared in different data sources, or if multiple causes of death were given. A list of all asbestos-related cases was provided to the Tumor Registry for matching with their list of documented mesothelioma cases. The registry then provided the number of additional mesothelioma cases that were not matched.

Results

Table 1 shows the reported fatalities from occupational disease by condition. There were 93 known fatalities from occupational disease in 1995, up from 90 in 1994. These fatalities are *in addition* to the 32 traumatic occupational fatalities for 1995 reported elsewhere (Connecticut OSHA/ Bureau of Labor Statistics).

There is little overlap between the reporting systems. For example, only 13 of the 68 cases in 1994 were reported in more than one system, and of 21 cases reported through Vital Statistics for 1995, only one had been reported through other data sources.

Mesothelioma, a cancer of the pleura caused almost exclusively by asbestos, appears to be considerably underreported in the traditional workers' compensation database. Based on combined reports from the Workers' Compensation Commission and Vital Statistics, there were eight cases in 1994 and six cases in 1995. The Tumor registry, however, which keeps detailed reports of cancers in Connecticut, had 22 additional cases in 1994 and 33 additional cases in 1995. At least two of the Vital Statistics cases may be environmental, since the listed occupation is "homemaker," although it is still possible that there had been previous occupational exposure.

1994 Fatality Reports

A total of 90 fatalities from occupational diseases were documented in 1994, in addition to the 36 fatalities from trauma. There were 44 reports of cancer, chiefly asbestos-related, with 33 mesotheliomas. There were also 34 reports of lung disease, again dominated by asbestos-related conditions, with 23 specifically noting asbestos exposure. Other lung disease fatalities included four due to silicosis and six from coal-workers' pneumoconiosis. Cases of

Table 1.—Sources: Workers Compensation Commission, Connecticut Labor Department CFOI Program, and Department of Public Health, Vital Statistics Division and Connecticut Tumor Registry.

Occupational Disease Fatalities, 1994 and 1995

	1994		**1995**	
Mesothelioma	33	36.7%	41	44.1%
Asbestosis	23	25.6%	24	25.8%
Cardiovascular	12	13.3%	14	15.1%
Other cancer	11	12.2%	11	11.8%
Silicosis	4	4.4%	2	2.2%
Central nervous system	0	0.0%	1	1.1%
Coal workers' pneumonconiosis	6	6.7%	0	0.0%
Other lung	1	1.1%	0	0.0%
Total	**90**	**100.0%**	**93**	**100.0%**

coal-workers pneumoconiosis are likely to be from exposures in other states, with the death occurring in Connecticut. There were 12 reported heart attack fatalities attributed to work, of which five appeared to be town/police cases covered under the Connecticut Heart and Hypertension laws.

1995 Fatality Reports

The pattern of fatalities for 1995 is quite similar to that of 1994, with the domination of asbestos-related conditions. There were 93 fatalities from occupational diseases, in addition to 32 traumatic fatalities. In addition to the 24 cases of asbestosis and 41 cases of mesothelioma, all the other reported cancer cases (eight lung cancer cases, six GI tract cases, and one unspecified) had a suspected relationship to asbestos.

Approximately 58% of the asbestos cases reported by the Workers' Compensation Commission, and through Vital Statistics suffered their exposure in ship building industries. Occupations listed for asbestos-related disease included pipefitting, construction, machining, and a wide variety of other jobs. Employment associated with silica fatalities included foundries, construction, and trucking.

There were 14 cases of heart attack reported, none of which appeared to be related to police and firefighter heart and hypertension laws. Only five of these heart attacks occurred in the warmer months (April through September), thus heat did not appear to be the key variable.

Discussion

This review of recorded deaths from occupational disease in Connecticut shows a high level of occupational disease burden, particularly from asbestos exposure. Numbers of occupational disease fatalities were over twice the 39 reported cases of drowning and two-thirds of the 149 cases of homicide in Connecticut for 1995 (Connecticut Dept. of Public Health, Vital Statistics). Further, the number of traumatic occupational fatalities is just one-third of that for occupational disease deaths.

These data can be considered the minimum number of fatalities from occupational diseases, since most are not individually identifiable. The lack of overlap of reporting to the different systems in Connecticut also indicates a large number of unrecorded cases, as does the low number of occupational reports of common conditions such as lung cancer. National estimates using a proportional mortality approach yield much higher estimates, with estimates of 6% to 10% of all cancers as being at least partially work-related, and 10% to 33% of lung cancer (Landrigan and Markowitz, 1989; Leigh et al, 1997). Estimated costs for illnesses were $26 billion in the U.S. Based on Leigh's estimates of the proportion of diseases attributed to occupation, Connecticut would be estimated to have approximately 500–850 occupational cancer fatalities (6% to 10% of 8,434 cancer deaths), and 900–1,800 from occupational cardiovascular disease (5% to 10% of 18,733 cardiovascular deaths) based on 1994 Connecticut statistics (Leigh et al, 1997; Connecticut Vital Statistics, 1994).

Cautions must be applied to the present data. The authors were unable to evaluate the extent of migration into and out of the state, and thus fatalities reported here may have been caused by employment in other states (and employment here could have led to fatalities in other states). Since there is little exposure to coal dust in Connecticut, it is expected that the small number of Black Lung cases are probably due to exposures in other states, and thus would constitute an over-estimate of Connecticut cases for that category. It is also possible that cases of mesothelioma (especially) and pneumoconioses (conceivably) could be due to nonwork environmental exposures, which would also constitute an over-estimate in these categories.

Heart disease cases reported under the legal definition of "work-related" for police and firefighters were included in this analysis, although they constitute a small percentage of the heart cases found. Other cases of heart disease caused or exacerbated by other work sources (such as carbon monoxide exposure, job stress) are typically not captured by any of these data sources. National studies have used estimates of 1% to 3% and 5% to 10% of all cardiovascular conditions as work-related (Landrigan and Markowitz, 1989; Leigh et al, 1997). In addition, all cases reported to the Workers' Compensation Commission were included in this analysis, and some of these may eventually be ruled as nonoccupational.

The fatalities reported here are dominated by asbestos-related disease. Asbestos-related diseases have a latency period of 10 to 40 years after exposure before symptoms develop. Thus, most of these asbestos-related fatalities have their origins in exposures occurring when there were few controls on asbestos. While exposures to asbestos have decreased over the past 30 years (due to banning of certain uses of asbestos, increased recognition of the hazard, and more stringent regulation), there remains some risk of exposure in the asbestos removal, demolition, and maintenance occupations.

The pattern of detectable fatalities is considerably different than that of reported nonfatal occupational diseases, which are dominated by Cumulative Trauma Disorders (such as Carpal Tunnel Syndrome), lung conditions (such as acute respiratory conditions, asbestos-related conditions, and asthma), and skin conditions (Morse and Schenck, 1997).

Under-reporting of fatal occupational diseases is a difficult problem to solve, since most chronic occupational diseases involve multiple exposures and have long latency periods. There have been efforts at the state level to include occupation on death certificates, but this is still poorly captured, with many identified as "retired" rather than the previous lifetime occupation. More complete information here would help in carrying out epidemiological studies of occupations at risk for specific diseases.

All known and suspected occupational diseases are required to be reported by physicians to the Connecticut Labor and Health Departments under state reporting statutes, but only a minority of physicians actually report into the system. Other states have been able to significantly increase physician reporting with active telephone outreach to physicians' offices on a monthly basis. Increased awareness and reporting of occupational diseases, including more attention to occupational histories, is needed to properly identify and prevent these common conditions.

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MORBIDITY AND MORTALITY WEEKLY REPORT

Achievements in Public Health, 1900–1999

Improvements in Workplace Safety—United States, 1900–1999

AT the beginning of this century, workers in the United States faced remarkably high health and safety risks on the job. Through efforts by individual workers, unions, employers, government agencies, scientists such as Dr. Alice Hamilton (see box, next page), and others, considerable progress has been made in improving these conditions. Despite these successes, much work remains, with the goal for all workers being a productive and safe working life and a retirement free from long-term consequences of occupational disease and injury. Using the limited data available, this report documents large declines in fatal occupational injuries during the 1900s, highlights the mining industry as an example of improvements in worker safety, and discusses new challenges in occupational safety and health.

Decreases in Fatal Occupational Injuries

Data from multiple sources reflect the large decreases in work-related deaths from the high rates and numbers of deaths among workers during the early 20th century. The earliest systematic survey of workplace fatalities in the United States in this century covered Allegheny County, Pennsylvania, from July 1906 through June 1907[1] (Fig. 1[not shown here]); that year in the one county, 526 workers died in "work accidents"*; 195 of these were steelworkers. In contrast, in 1997, 17 steelworker fatalities occurred nationwide.[2] The National Safety Council estimated that in 1912, 18,000–21,000 workers died from work-related injuries.[3] In 1913, the Bureau of Labor Statistics documented approximately 23,000 industrial deaths among a workforce of 38 million, equivalent to a rate of 61 deaths per 100,000 workers.[4] Under a different reporting system, data from the National Safety Council from 1933 through 1997 indicate that deaths from unintentional work-related injuries declined 90%, from 37 per 100,000 workers to four per 100,000.[3] The corresponding annual number of deaths decreased from 14,500 to 5,100; during this same period, the workforce more than tripled, from 39 million to approximately 130 million.[3]

More recent and probably more complete data from death certificates were compiled from CDC's National Institute for Occupational Safety and Health (NIOSH) National Traumatic Occupational Fatalities (NTOF) surveillance system[5]; CDC, unpublished data, 1999). These data indicate that the annual number of deaths declined 28%, from 7,405 in 1980 to 5,314 in 1995 (the most recent year for which complete NTOF data are available). The average rate of deaths from occupational injuries decreased 43% during the same time, from 7.5 to 4.3 per 100,000 workers. Industries with the highest average rates for fatal occupational injury during 1980-1995 included mining (30.3 deaths per 100,000 workers), agriculture/forestry/fishing (20.1), construction (15.2), and transportation/communications/public utilities (13.4) (Fig. 2).† Leading causes of fatal occupational injury during the period include motor vehicle-related injuries, workplace homicides, and machine-related injuries (Fig. 3).

Improvements in Mining§ Safety

On December 6, 1907, a coal mine explosion in Monongah, West Virginia, killed a reported 362 men and boys (unofficial estimates exceeded 500 deaths), marking the largest coal mining disaster in U.S. history. Of the 2,534 mining-related fatalities that occurred in bituminous coal mines that year, 911 (36%) resulted from explosions of gas, coal dust, or a combination; 869 deaths occurred in only 11 incidents. The Monongah catastrophe catalyzed public awareness and led to passage of the Organic Act of 1910, which established the U.S. Bureau of Mines (USBM).

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*When a death occurs under "accidental" circumstances, the preferred term within the public health community is "unintentional injury."

†The NTOF surveillance system classifies industries according to the Standard Industry Classification Manual, 1987, which, unlike the definition used by the Mine Safety and Health Administration (MSHA), includes the oil and gas sectors of mineral extraction in the mining industry.

§MSHA data are used in this section of the report; these data exclude oil and gas extraction, and data collection for mining according to MSHA includes only deaths that occur on mine property. Deaths likely to occur off mine property, such as during operation of a motor vehicle (the overall leading cause of death during 1980–1994 [Fig. 3]), are excluded.

Reprinted from the *Morbidity and Mortality Weekly Report*, 11 June 1999; vol. 48, no. 22, Centers for Disease Control (CDC), National Institutes for Health (NIH).

Alice Hamilton, M.D.

Alice Hamilton (February 27, 1869–September 22, 1970) was the first U.S. physician to devote herself to research in industrial medicine. Born into a prominent family in Indiana (her sister was the well-known classicist Edith Hamilton), Alice graduated from medical school at the University of Michigan in 1893. After accepting a teaching position at the Women's Medical School of Northwestern University in 1897, she moved into Jane Addams' Hull House in Chicago. There she opened a well-baby clinic for poor families in the local settlement house neighborhood. As she acquainted herself with the families in the neighborhood, she learned of their pains, strange deaths, lead palsy, and "wrist drop," and of the high numbers of widows. Encouraged by the reformers of Hull House, she began to apply her medical knowledge to these problems.

Dr. Hamilton realized that little was written or understood about occupational illnesses in the United States. In 1908, she published her first article about occupational diseases in this country and was soon a recognized expert on the topic. Starting in 1910, initially under the aegis of a commission of the State of Illinois, and later the Federal Bureau of Labor Statistics, she explored occupational disorders and their social consequences. Relying primarily on "shoe leather epidemiology" and the emerging laboratory science of toxicology, she pioneered occupational epidemiology and industrial hygiene in the United States. Her findings were so scientifically persuasive that they caused sweeping reforms, both voluntary and regulatory, to improve the health of workers.

Investigations for which she is best known include carbon monoxide poisoning in steelworkers, mercury poisoning in hatters, and "dead fingers" syndrome among laborers using jackhammers. In her field investigations, she applied precepts of scientific integrity and prudent public health practice that continue to influence the discipline of occupational health. These include the necessity for a strict definition of the disease problem, a thorough understanding of the industrial processes involved, and on-the-spot reporting of findings and recommendations.

In 1919, Dr. Hamilton was appointed Assistant Professor of Industrial Medicine at Harvard Medical School, the first woman to be on the faculty of Harvard University. While there, she served two terms on the Health Committee of the League of Nations. When she retired from Harvard at age 66 years, she became a consultant to the U.S. Division of Labor Standards and served as the president of the National Consumers League.

Today, at the laboratory that bears her name in Cincinnati, Ohio, and at other facilities, researchers of CDC's National Institute for Occupational Safety and Health still explore the "dangerous trades." Alice Hamilton was a physician, scientist, humanitarian, and undisputed leader in the social reform movement of the 20th century.

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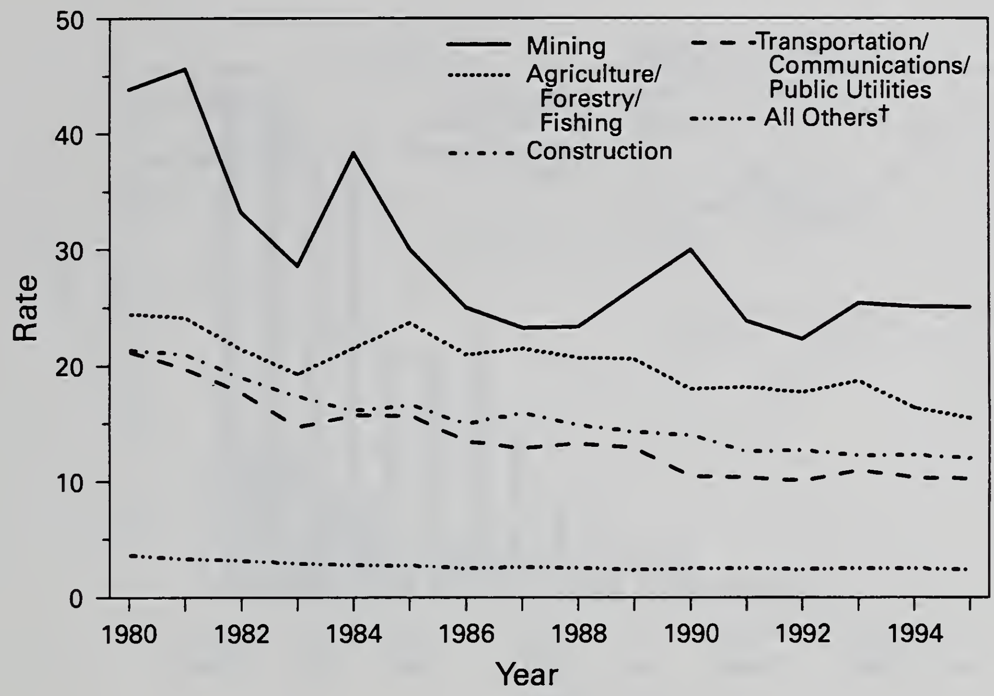
From 1911 through 1997, approximately 103,000 miners died at work (Fig. 4). During 1911–1915, an average of 3,329 mining-related deaths occurred per year among approximately one million miners employed annually, with an average annual fatality rate of 329 per 100,000 miners. During the century, the average annual number of workers (operators and contractors combined) in the mining industry has declined to approximately 356,000, and deaths have dropped approximately 37-fold, from 3,329 to 89; injury fatality rates have decreased approximately



*Per 100,000 workers.

†Includes public administration, manufacturing, wholesale trade, retail trade, services, and finance/insurance/real estate.

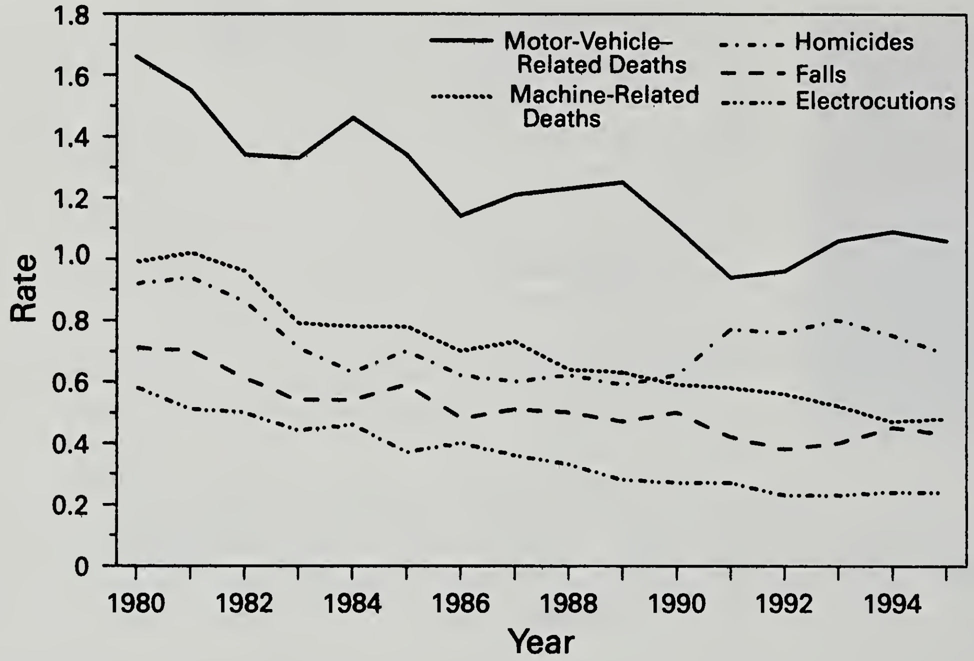
Figure 2.—Occupational injury death rates,* by industry division and year—United States, 1980–1995.

13-fold, to 25 per 100,000 during 1996–1997.

Historically, the largest number of miners have been killed by collapsing mine roofs and vertical walls, followed by haulage-related incidents. However, methane gas and coal dust explosions have caused the largest number of deaths from "disasters" (ie, incidents in which five or more deaths occurred); airborne suspension of dry coal dust and natural liberation of methane (present in all coal beds) create an environment susceptible to explosions. From 1911 through 1920, explosions accounted for approximately 84% of all disaster-related deaths. Workplace interventions (eg, safer equipment and improved ventilation) during the first half of the century led to a dramatic decline in explosion-related fatalities, from an average of 477 per year in 1906–1910 to less than three per year in 1991–1995 (Fig. 5). All other causes of death associated with underground coal mines (except machinery) declined similarly from the first to the last 20-year interval of this period.

Factors Contributing to Worker Safety

The decline in occupational fatalities in mining and other industries reflects the progress made in all workplaces since the beginning of the century in identifying and correcting the etiologic factors that contribute to occupational health risks. If today's workforce of approximately 130 million had the same risk as workers in 1933 for dying from injuries, then an additional 40,000 workers would have died in 1997 from preventable events (CDC, unpublished data, 1999). The declines can be attributed to multiple, interrelated factors, including efforts by labor and management to improve worker safety and by academic researchers such as Dr. Alice Hamilton. Other efforts to improve safety were developed by state labor and health authorities and through the research, educa-tion, and regulatory activities undertaken by government agencies (eg, USBM, the Mine Safety and Health Administration [established as the Mining Enforcement and Safety Administration in 1973], the Occupational Safety and Health Administration [OSHA] [established in 1970], and NIOSH). Efforts by these groups led to physical changes in the workplace, such as improved ventilation and dust suppression in mines; safer equipment; development and introduction of safer work practices; and improved training of health and safety professionals and of workers. The reduction in workplace deaths has occurred in the context of extensive changes in U.S. economic activity, the U.S. industrial mix, and workforce demographics.[6] Societywide progress in injury control also contributes to safer workplaces—for example, use of safety belts and other safety features in motor vehicles[6] and improvements in medical care for trauma victims.



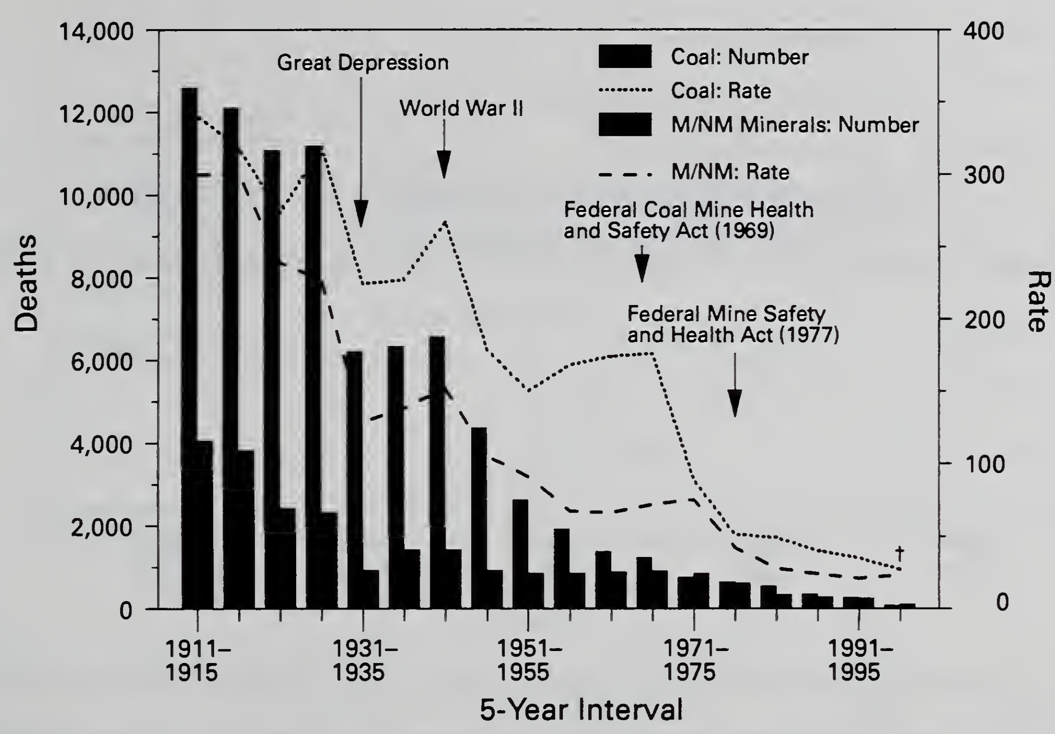
*Per 100,000 workers.

Figure 3.—Rates* for leading causes of occupational injury deaths, by cause and year—United States, 1980–1995.

Only in some instances do data permit association of declines in fatalities with specific interventions. Before 1920, using permissible explosives and electrical equipment (which can be operated in an explosive methane-rich environment without igniting the methane), applying a layer of rock dust over the coal dust (which creates an inert mixture and prevents ignition of coal dust), and improved ventilation, such as reversible fans, led to dramatic reductions in fatalities from explosions (Fig. 5).[7] New technologies in roof support and improved mine design reduced the number of deaths from roof falls. However, technology also introduced new hazards, such as fatalities associated with machinery. An approximately 50% decrease in coal mining fatality rates occurred from 1966–1970 to 1971–1975 (Fig. 4); 1971–1975 is the period immediately following passage of the 1969 Federal Coal Mine Health and Safety Act, which greatly expanded enforcement powers of federal inspectors and established mandatory health and safety standards for all mines. The act also served as the model for the 1970 Occupational Safety and Health Act. Following the 1977 Federal Mine Safety and Health Act, a 33% in fatalities occurred in metal and nonmetallic minerals mining (1976–1980 compared with 1981–1985) (Fig. 4).

Similarly, the impact of more recent targeted efforts to reduce workplace fatalities can be illustrated by data on work-related electrocutions. During the 1980s, there were concerted research and dissemination efforts by NIOSH, changes to the National Electrical Code and occupational safety and health regulations, and public awareness campaigns by power companies and others. During this decade, work-related electrocution rates declined 54%, from 0.7 per 100,000 workers per year in 1980 to 0.3 in 1989; the number of electrocutions decreased from 577 to 329.[6]

Although the decline in injuries in general industry since 1970 seems to have resulted from a variety of factors, some sources point to the Occupational Safety and Health Act of 1970 [Public Law 91-596], which created NIOSH and OSHA.[6,8] Since 1971, NIOSH has investigated hazardous work conditions, conducted research to prevent injury, trained health professionals, and developed educational materials and recommendations for worker protection. OSHA's regulatory authority for worksite inspection and development of safety standards has brought about safety regulations, mandatory workplace safety controls, and worker training. During 1980–1996, research findings indicated that training creates safer workplaces through increased worker knowledge of job hazards and safe work practices in a wide array of worksites.[9]



*Per 100,000 workers.
†Data are for 1996 and 1997.

Figure 4.—Number of deaths and fatality rates* in mining coal and metal/nonmetallic (m/NM) minerals, by five-year interval—United Sates, 1911–1997.

Future Directions

Despite the accomplishments described in this report, workers continue to die from preventable injuries sustained on the job. Ongoing efforts to address important workplace hazards include conducting field investigations of fatalities in high-risk occupations and industries, such as the Fire Fighter Fatality Investigation and Prevention Program, establishing a research center to facilitate childhood agricultural injury prevention (National Children's Center for Rural and Agricultural Health and Safety), and developing educational materials for worker protection, such as Preventing Homicide in the Workplace.[10] Despite major gains in workplace safety, mining remains the most dangerous industry, and mining safety research remains a national priority.

The National Occupational Research Agenda (NORA), developed by NIOSH and approximately 500 organizations and persons nationwide, identified traumatic injuries as one of its public health priorities. NORA was developed in recognition of the rapidly changing nature of the workplace and workforce and provides the framework for research to improve worker safety in the 21st century. The NORA Traumatic Injuries Team sponsored the first National Occupational Injury Symposium in 1997 and outlined priority needs.[11] These include the need to identify new sources of surveillance data, to improve identification of work-related injuries and illnesses in existing databases, to link data from existing sources for improved information about injuries, and to better assess injury exposures and intervention outcomes. Increased attention to other NORA priority areas, such as intervention effectiveness research, surveillance research methods, and organization of work, should guide continued national efforts to reduce both occupational illnesses and injuries in the next century.

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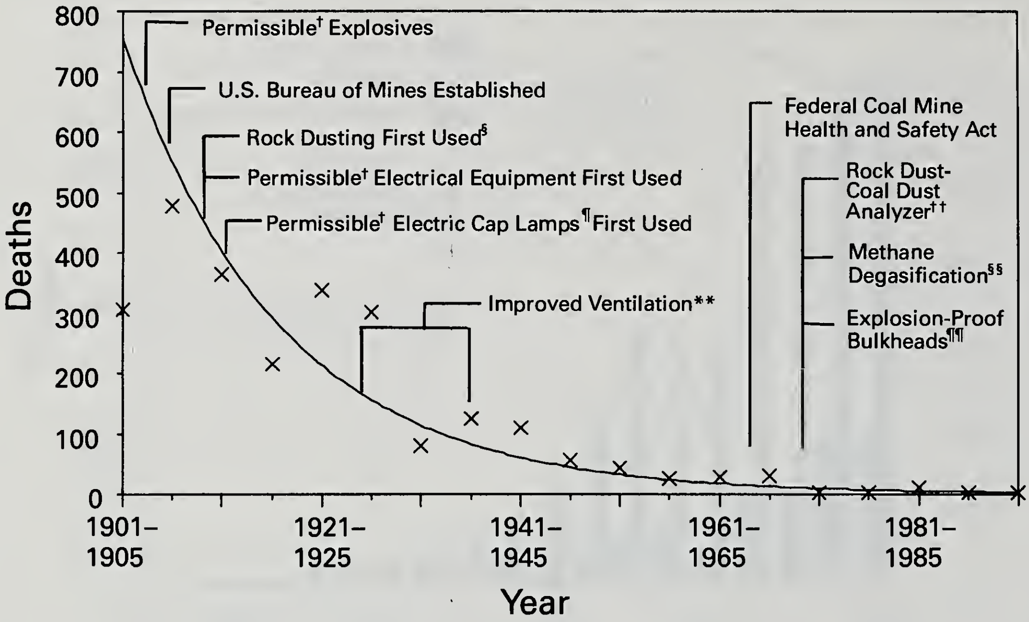

*Each X represents the five-year average of the number of deaths resulting from explosions; the line is a smoothed regression line through the five-year averages.

†Explosives and equipment that can be used in an explosive methane-rich environment without causing a methane explosion.

§The process of applying a layer of rock dust over the coal dust, which creates an inert mixture and inhibits a coal dust explosion.

¶Lamps worn on minors' caps.

**Ventilation improvements, including the use of reversible fans, reduce the concentration of methane and remove the explosive gas from the mine.

††A hand held monitor that provides instantaneous readings of the rock-to-coal dust mixture to ensure that it is inert.

§§Techniques to remove methane from the coal bed before mining the coal.

¶¶Explosion-proof walls used to seal abandoned (mined-out) areas to protect workers in active parts of the mine.

Figure 5.—Five-year averages of annual number of deaths related to coal mine explosions—United States, 1901–1995*

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Abstract of Papers: Danbury Hospital 14th Annual Joseph L. Belsky, M.D., Research Day

The following 13 abstracts were selected from 38 submitted abstracts.

Hypersensitivity Pneumonia: A Clinicopathologic Study of 10 Cases with Lung Biopsies at Danbury Hospital

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AND ARTHUR KOTCH, M.D.
Departments of Pathology and Laboratory Medicine and Medicine (Pulmonary)

Hypersensitivity pneumonia (HP) is a distinct form of interstitial lung disease caused by inhaled organic antigens or certain drugs. In some cases of HP, the offending antigen remains unknown despite detailed exposure history and serologic studies. We searched the Danbury Hospital Surgical Pathology files for cases of HP diagnosed by lung biopsy during the period 1993–1998. For each case, we retrospectively reviewed in detail the clinical presentation, radiographic studies, pulmonary function testing, exposure history, serologic testing, biopsy findings, and response to treatment.

We identified 10 cases of HP (three males, seven females, age range 35 to 85 years; mean 57 years). Presenting symptoms included progressive dyspnea (10/10 patients), dry cough (9/10 patients), fever (3/10 patients), weight loss (3/10 patients), anorexia, and inspiratory chest pain (1/10 patient each). Duration of symptoms ranged from 10 days to 18 months. Chest radiographs showed bilateral infiltrates described as diffuse in 7/10, patchy in 3/10, interstitial/reticulonodular in 5/10, and alveolar in 5/10. Pulmonary function testing was performed in seven patients, revealing mild to severe reduction in diffusion capacity in six patients, and mild to moderate obstructive disease in three patients.

There were three subgroups of patients based on source of antigen exposure: organic antigen in four (pet birds in three, mold in one), drug reaction in two (sulfasalazine and gemcitabine in one each), and indeterminate source in four patients. Hypersensitivity serologic panel performed in six patients revealed positive antibodies in only two: pigeon antigens in one patient with known exposure to birds, and *Aspergillus niger* antigen in the patient exposed to a moldy environment.

Lung biopsies (eight thoracoscopic wedges, two transbronchial) showed mild to dense interstitial, predominantly lymphoplasmacytic or lymphohistiocytic leukocytic infiltrates, which were diffuse in 7/10 patients, patchy in 3/10 patients, and with perivascular/peribronchial accentuation in 8/10. Poorly formed granulomas and/or scattered multinucleated giant cells were present in 8/10 cases, including 4/4 with known organic antigen exposures, 1/2 with drug reactions, and 3/4 with indeterminate antigen source. Foci of bronchiolitis obliterans-like reaction were noted in 8/10 cases. All 10 patients were treated with prednisone and discontinuation of the antigen source, if known. All patients responded favorably to steroids, although one patient in the indeterminate antigen group experienced recurrence of disease after tapering of prednisone.

Inclusion, clinicopathologic findings in this series of patients with HP were strikingly similar among the three subgroups. Subtle differences include the shorter duration of symptoms prior to presentation in the drug reaction subgroup.

Instructor of Pathology, University of Connecticut School of Medicine (Dr. Sieber); Associate Clinical Professor Medicine, Yale University School of Medicine (Dr. Kotch).

Monoclonal Antibody (Prostascint) Imaging for the Detection of Recurrent and Metastatic Prostate Cancer

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WILLIAM HENNESSY, M.D, AND KELLY CHASSE
Departments of Pathology and Laboratory Medicine (Nuclear Medicine) and Surgery (Urology)

Prostate cancer is one of the most commonly diagnosed tumors and the second leading cause of cancer death in men. Extraprostatic disease is found in more than one-third of patients with apparent clinically localized prostate cancer. Standard imaging techniques such as comptued tomography (CT) and magnetic resonance imaging (MRI) may provide anatomic information only about large volume soft tissue tumor involvement. Radiolabeled monoclonal antibodies (Indium-111 ProstaScint) is a new modality which is a more "functional" type of imaging. Tomographic scanning (SPECT) with this material allows detection of small areas of early tumor recurrence or metastases before these could be detected by other conventional techniques like CT or MRI.

Twenty-five patients (53–82 years old) who underwent ProstaScint scans at Danbury Hospital between August 1998 and March 1999 were reviewed. Five of 25 (20%) of these were normal. Seven of 20 (35%) showed pelvic, abdominal, chest, or cervical nodal involvement with or without local prostatic disease that were not detected on CT. Eleven of 20 (55%) of the patients were found to have uptake in the prostate fossa alone. This may occasionally be a nonspecific finding and may represent inflammation after radiation therapy or recurrent local disease. Two of 20 (10%) patients had distant lymph node involvement without evidence of local prostatic disease. Fourteen of 20 (70%) of those with prostate fossa uptake were felt to be significant and most likely represented recurrence of prostate cancer. Four of 20 (20%) were equivocal.

ProstaScint scanning is a promising, noninvasive, and highly sensitive new modality. It is indicated in newly diagnosed patients with prostate cancer thought to be clinically localized after standard diagnostic evaluation who are at risk for lymph node metastasis; and in post-prostatectomy patients with rising PSA and negative or equivocal standard metastatic workup. Overall reported sensitivity, specificity, accuracy, and positive predictive value for detection of extraprostatic disease are 75%, 86%, 81%, and 79% respectively whereas CT, MRI, and ultrasound of the pelvis reportedly have a combined accuracy of only 48% in detecting lymph node disease. Scans may also demonstrate "skip metastases" to lymph nodes in the para aortic and mesenteric regions without involvement of pelvic lymph nodes. ProstaScint imaging has the potential of directing appropriate therapy quickly and thus decreasing patient morbidity/mortality by allowing early intervention.

Clinical Professor (Dr. Gupta), Assistant Clinical Professor (Dr. Johns), University of Connecticut School of Medicine.

Scintigraphic Identification of the "Sentinel Node" for Management of Melanoma and Breast Cancer

ANIL RAMACHANDRAN, M.D., SHIV GUPTA, M.D., WILLIAM JOHNS, M.D.,
JOHN FAMIGLIETTI, M.D, JOHN BORRUSO, M.D.,
GREGORY BRUCATO, M.D., AND ELAINE MAISTO
Departments of Pathology and Laboratory Medicine (Nuclear Medicine) and Surgery

Lymphoscintigraphy to identify lymphatic drainage patterns and lymph node localization has been available for nearly 20 years. Recently its application to localize the first draining (sentinel) node in patients with melanoma, breast, and vulvar cancers has been reported. The hypothesis is that if the initial (sentinel) node is uninvolved then other nodes in the group should also be tumor free.

We reviewed all lymphoscintigrams performed at Danbury Hospital between May 1998 and February 1999. Seventeen of these were for evaluation of melanoma and 22 were breast cancer cases. All patients underwent surgical biopsy on the day of the scan. Correlation was done with blue dye studies and gamma probe evaluation in the operating room as well as pathology biopsy reports when available.

For melanoma cases Technetium labeled filtered sulfur colloid was injected intradermally surrounding the original tumor site. Nodal drainage in all cases was noted to be rapid, with identification of a sentinel node within approximately 20 minutes. This was marked externally on the skin surface. On biopsy 16 (94%) of the sentinel nodes were tumor free. In all cases none of the other nodes were positive. One (6%) patient had a positive sentinel node (micrometastasis) without other positive nodes in the drainage basin.

Results of breast cancer patients were variable. Most patients had undergone prior excisional biopsies of tumors resulting in some disruption of lymphatic channels. Injections were performed in the original peritumor sites. Migration of tracer was slower than in the melanoma cases. In three cases there was no visualization of a sentinel node. In one case a sentinel node was localized by intraoperative nuclear probe at surgery. Time of visualization of nodes varied between 15 to 180 minutes. In those cases with sentinel nodes identified, 14 (80%) were benign. In one case (5%) axillary en bloc dissection revealed a single positive lymph node (ie, no "skip metastases"). Six patients (30%) had a positive sentinel node, of which three had another positive axillary node. In two cases the sentinel node was in the internal mammary chain and thus not biopsied.

Literature review indicates overall sensitivity, specificity, positive predictive value, and accuracy of 88% to 100%, 100%, 100%, and 96% to 100% in breast cancer patients respectively. The false negative rate was between 0% to 12.5%. The value of the study is to minimize the extent of node dissection required and thus decrease subsequent morbidity and lymphedema. In conclusion, lymphoscintigraphy allows noninvasive localization of the sentinel node draining the site of tumor allowing a biopsy of the node to assess the extent of disease.

Clinical Professor (Dr. Gupta), Assistant Clinical Professor (Dr. Johns), University of Connecticut School of Medicine.

Monolayer Thin Preparation (ThinPrep) *vs* Conventional Pap Smears in the Diagnosis of Atypical Squamous and Glandular Cells of Undetermined Significance: A Comparison with Previously Reported Data

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LOIS GRIGG, AND EL-FANEK, M.D.
Department of Pathology and Laboratory Medicine (Cytology)

Although the ThinPrep Pap Test is replacing conventional Pap smears in many clinical practices, data regarding the experience of community hospitals with the new methodology are scarce.

Using the laboratory computer system, a year of ThinPrep diagnoses (1998) was compared to previous published data from 1996 and 1998 for conventional smear diagnoses of atypical squamous cells of undetermined significance (ASCUS) and atypical glandular cells of undetermined significance (AGUS) respectively.

In 1998, a total of 12,183 ThinPrep Pap smears were performed. Five hundred forty-seven (4.4%) were diagnosed as atypical. In 81 (0.7%) of these a diagnosis of (AGUS) was made, and in 416 (3.4%) a diagnosis of ASCUS was made. The patients with an ASCUS diagnosis were followed with 56 repeat ThinPrep smears, all of which were again diagnosed as ASCUS. One hundred biopsies were performed on these patients: 57 (57%) of these showed chronic cervicitis; 14 (14%) showed condylomatous cervicitis or HPV effect, four (4%) showed low-grade squamous intraepithelial lesion, and three (3%) showed high-grade squamous intraepithelial lesion. The remaining 22 cases (22%) were classified as benign.

The patients with AGUS were followed with repeat smears in one case and the diagnosis was maintained. A diagnosis of AGUS by ThinPrep resulted in 10 biopsies, all of which received a benign diagnosis.

In comparison with our previous published ASCUS data at Danbury Hospital the use of ThinPrep resulted in an increase in the ASCUS rate from a 1.7 % to a 3.4%. The ThinPrep resulted in a sharp increase in benign diagnosis in subsequent biopsies from 39.5% with conventional smears to 79%. The detection of squamous intraepithelial lesions in subsequent biopsies was decreased from 33.6% to 7%. The detection of condylomatous or HPV effects decreased from 26.9% to 14%. With the use of the ThinPrep the AGUS rate dropped from a 1.9% to a 0.7%. The subsequent biopsy in a ThinPrep diagnosis resulted in no significant cervical or uterine pathology as compared with 29.5% with conventional smear as previously reported.

The use of the monolayer smear (ThinPrep) enables the pathologist to see more cellular and nuclear details than with conventional smears. An increase in the atypical rates can be explained by an increased caution and the natural learning curve of a new methodology. From our data an ASCUS or AGUS diagnosis warrants repeat cytologic smear and an overall more conservative approach than we are accustomed to with conventional pap smears. The overall atypical rate was decreased from 9.4% in 1997 to 8.0% in 1998.

A Holistic Approach to Reducing the Symptoms of Fibromyalgia

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AND ELISE TROCK, M.S.W.
Department of Medicine (Rheumatology)

Fibromyalgia, a syndrome affecting mostly women, is characterized by widespread pain, fatigue, and sleep disturbance. The current standard treatment is often ineffective.

Twelve patients who met the 1990 criteria of the American College of Rheumatology for fibromyalgia with a minimum score of 40 on the fibromyalgia impact questionnaire, took part in this 12-week group program.

Patients were evaluated before and after using regional pain score (RPS), fibromyalgia impact questionnaire (FIQ), and global assessment on visual analog scale (VAS). Baseline and endpoint history and physical examination as well as laboratory data were obtained.

The first month involved "parasite cleanse" and a detoxification, including tapering off on all nonsteroidal anti-inflammatory drugs or tricyclic antidepressants and any manual treatment or exercise program. Patients also started twice-a-week group meetings. During the second and third month they began nutritional supplements including Ginkgo, COQ10, Lecithin, and Kava Kava. The primary outcome of the study was a 20% reduction in the scores of FIQ, RPS, or VAS.

Data analysis using paired comparison t-test showed that there was 18% mean improvement in FIQ (P=0.025), 21% mean improvement in RPS (P=0.09), and 12% mean improvement in VAS (P=0.14). Six of the twelve patients had at least 20% improvement in one of above scores. In addition there was an 18% mean improvement in the number of trigger points (P=0.023). There were no significant side effects associated with nutritional supplements. Eight patients were ready to continue the program and nine would recommend it to others.

Our study showed a trend toward improvement in all of the significant fibromyalgia scores. Although the small sample size and lack of control group makes our data inconclusive, further randomized and larger studies are needed to evaluate a holistic approach to this disease.

Assistant Clinical Professor of Medicine, Yale University School of Medicine (Dr. Trock).

The Significance of Stethoscopes in the Spread of Nosocomial Infection

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Nosocomial infections affect up to 10% of hospitalized patients resulting in increased length of stay, increased patient cost in lost work days and out of pocket cash, increased insurance costs, and increased costs to the hospital. There is also mortality directly associated with nosocomial infections. Research has shown that inanimate objects (eg, thermometers, lab coats) can be vectors for pathogens. The purpose of this study was to determine if stethoscopes were a potential vector for nosocomial infections.

A sample of 30 nurses' stethoscopes was assessed for growth of pathogens. Each stethoscope diaphragm was tested on a blood agar plate. The plates were incubated and read at 24- and 48-hour intervals by standard lab methods. Culture plates with suspected pathogenic growth were further tested for antibiotic resistance with a screening test. In addition, a researcher developed questionnaire was given to each participant to determine stethoscope cleaning routines.

The results of cultures yielded four plates with pathogeneic growth (13% of subjects tested). Two plates were positive for coagulase positive staphylococcus, one plate grew enterococcus, and the fourth plate grew both enterococcus and coagulate positive staphylococcus. These four plates were further tested with vancomycin and oxacillin discs to determine antibiotic resistance. One plate was positive for vancomycin resistance enterococcus, a potentially lethal pathogen. The questionnaire responses did not correlate. Cleaning routines varied widely.

The implications of this study stress the importance of infection control. The patient's environment and the items that come into contact with each patient could potentially be vectors for nosocomial infection. Stethoscopes should be cleaned between patients. This study found an antibiotic resistant organism on one stethoscope. Further research should examine other items that could be vectors. In addition, methods and routines for cleaning stethoscopes should be investigated.

Passive Tobacco Smoke and its Effect on Health in Preshcool-Age Children

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In addition to the well-accepted health risk imposed by cigarettes to those who smoke them, environmental tobacco smoke (ETS) harms those who breathe it. ETS will result in newborns who are small for gestational age and in children with respiratory tract illnesses. We studied this important health issue with a collection of data on the prevalence and health status of preschool-age children exposed to ETS.

A total of 178 preschool-age children, attending the Pediatric Health Center during the summer months of 1998 for their school entrance physical examination, were recruited into the study. For each child enrolled, a portion of the routine urine sample was retained and assayed for cotinine, a breakdown metabolite of nicotine. The medical records of each child were reviewed for clinical data of respiratory tract infections and the presence of asthma. Sixty-three samples were excluded from the study because of ineligibility with 115 urine sample-child pairs entered into the study.

Of the 115 children, 44 had urinary cotinine levels > 50 ng/ml (+10%) suggesting their exposure to ETS. The prevalence of ETS exposure among preschool-age children attending the Pediatric Health Center was at 38.2%. For these 44 children the average respiratory infection rate per year was 3.81. In contrast, the 71 children with urinary cotinine levels at < 49 ng/ml, suggesting no ETS exposure, had the average respiratory infection rate per year at 2.71. In addition, 25 (57%) of the 44 positive cotinine subjects are asthmatic patients as opposed to 27 (38%) out of the 71 negative cotinine subjects. Those with positive cotinine levels also demonstrated a higher frequency of office visits throughout their medical history, averaging 1.84 more visits per year compared to that of the negative cotinine group.

In summary, we documented that there is a high prevalence of ETS exposure among children attending the Pediatric Health Center. Respiratory tract infections, office visits, and the clinical diagnosis of asthma were increased among these ETS exposed children.

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Breast Self-Examination Teaching Practices of Nurse Practitioners in Connecticut

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Breast cancer is the most common cancer in women. The etiology of breast cancer is unknown. The prognosis for breast cancer is significantly improved the earlier it is detected. Breast self-examination (BSE) has been widely advocated in the early detection of breast cancer. Studies show that although most women (96%) know about BSE only about 33% perform it on a monthly basis (Salazar, 1994). Research has revealed that women report a lack of knowledge, lack of confidence, and lack of education and reinforcement from health-care professionals as reasons why they do not practice BSE.

The purpose of this research was to evaluate the BSE teaching practices of Nurse Practitioners in Connecticut. The conceptual framework was based on Self-Care Deficit Theory (Orem, 1975). A random sample of one hundred Nurse Practitioners who were members of the Connecticut Nurse Practitioners Group, Inc. participated in the study. Participants were mailed an investigator-designed tool that investigated their BSE teaching practices. Demographic data were also collected. A 70% response rate was achieved. The majority of Nurse Practitioners teach BSE and reinforce that teaching on a regular basis. BSE teaching began in the teenage years and continued through the patients' lifespan. A variety of teaching methods were employed, the most common method being circular.

This research demonstrated that BSE is indeed being taught to the patients of Nurse Practitioners who participated in this study. Nurse Practitioners are primary health-care professionals who promote positive health behaviors and self-care skills through education and counseling. The Nurse Practitioners who responded to this survey are models of this behavior as evidenced by their BSE teaching practices.

Pediatric Trauma Injuries: Danbury Hospital Experience—1998

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At the national level, injury in children greatly surpasses all other major disease groups in its impact on morbidity and mortality. Injury can be prevented by changed behaviors through awareness and education.

The epidemiology of childhood trauma injuries treated at Danbury Hospital in 1998 was reviewed and compared to latest statistics published on Connecticut (Lapidus, 1998). Data was compiled from trauma service coding of emergency and hospital records.

One hundred and three (103) records were available for review. Pediatric cases were defined as age ≤ 16 years on the day of injury. Overall, males were injured more frequently (63%) than females (38). Under eight years of age, the number of injured children was almost equal (13 girls, 16 boys) yet for adolescents, the girls represented only six injuries, the boys 26 injuries.

Falls were the most common mechanism of injury, 47% of all injuries reviewed. For girls, falls accounted for 58% of all injuries, with 18% occurring as an occupant in a motor vehicle accident (MVA), 8% as a pedestrian hit by a car, and 3% as a bicyclist. For boys, falls represented 40% of all injuries, whereas bicycle accidents (including two ATV injuries) accounted for 18%, occupant in an MVA (12%), and as the driver in an MVA 3%. Sports-related injuries, either organized or recreational, accounted for at least 14% of injuries in boys. Only one boy was a pedestrian injured by a motor vehicle. This represented the single fatality recorded in 1998.

Five children were transferred to other centers for specialized care. Four were boys with multiple injuries; passenger in a MVA, avulsion (amputation) from a mower, closed head injury from a fall, and a pathologic femur fracture after a football collision. The female patient was a toddler with a near-drowning.

Injuries in children of all ages occurred most commonly between 4 PM and 8 PM (50%). Expanding the time from 12 NOON to 8 PM, 74% of all pediatric injuries occurred. In 1998, only two children arrived in the hospital between 12 MIDNIGHT and 4 AM, both having received injuries earlier in the day, yet accessing care hours later. Only one child was injured between 4 AM and 8 AM and she was an occupant in an MVA. Evaluation of monthly injuries finds an increase in the warmer months with 63% occurring between June and September. Injuries occurred on every day of the week, with no significance noted between weekdays (10 to 16 injuries/on that day) and the weekend (13 to 19 injuries/on that day).

Injured children came from Danbury (31), Ridgefield (13), Bethel (11), and Brookfield (7) with representation from most towns both in the greater Danbury area as well as New York State (10).

Initiatives for injury prevention are available on the state and national levels, such as the Connecticut Childhood Injury Prevention Center (CCIPC) and the National Safe Kids Campaign. Identification of the mechanisms and temporal occurrence of injury in the Danbury area can help us focus our efforts to ensure the health and safety of our children.

Bone Resorption Rates in Children Correlated with Dietary Calcium Intake

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The primary objective of the study was to measure bone turnover as reflected by the urinary excretion of a specific and sensitive marker, pyrilinks-D, in children and to correlate it with their dietary calcium intake and urinary excretion of calcium.

Forty-nine children between two and 14 years of age participated in the study. Parents were asked to complete detailed diaries of all oral intakes for their children over a 48-hour period. At the end of that period, a urine sample was obtained for the analysis of pyrilinks-D, which measures the excretion of deoxypyridinoline crosslinks, indicators of bone resorption, and urinary calcium. Pyrilinks-D is a crosslink of type 1 collagen which is released during bone resorption, excreted unmetabolized in urine, and is unaffected by diet. Measurement of pyrilinks-D in urine offers a specific and sensitive assessment of bone resorption.

In 15 children, the pyrilinks-D values were abnormally high. Eleven (73%) of these children had low dietary calcium intake. In 34 children, the pyrilinks-D values were within normal limits. However, the dietary calcium intake in 18 (53%) children was also low. All 49 children studied had normal urinary excretion of calcium.

In summary, 29 (59%) out of 49 children in this study had low dietary calcium intake and 11 children with low calcium intake had increased rate of bone resorption.

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Significance of Peritoneal Washing Cytology for Staging of Gynecologic Malignancies: Experience at Danbury Hospital

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Microscopic evaluation of cells washed from the peritoneal cavity during surgery for gynecologic tumors is used to detect subclinical intraperitoneal metastases for these tumors. The presence of peritoneal involvement indicates a worse prognosis, and thus the results of peritoneal washing cytology are incorporated in staging and treatment decisions. The purpose of this study was to evaluate the efficacy of this procedure.

Three hundred ninty-seven intraoperative washings for gynecologic disease at Danbury Hospital from 1995 to 1998 were reviewed. One hundred twenty-one cases of gynecologic malignancies were selected for the study. The cases included endometrial, cervical, ovarian and tubal carcinomas, and borderline ovarian tumors.

For 28 patients with ovarian carcinoma, peritoneal washing cytology was positive in 19 (68%) cases. In two cases (7%) a change in the stage resulted. For the 81 patients with endometrial carcinoma, cytology was positive in six cases (7%). In two cases (2.5%) the cytopathologic diagnosis changed the stage of the disease. Of the six cases of cervical carcinoma, one had positive cytology. There were four cases of borderline ovarian tumors with negative cytology and two cases of tubal carcinoma with positive cytology.

In a small number of cases (about 10%) malignant cells in the washings changed postoperative staging, influencing therapeutic decisions and prognosis for these patients. For the remainder of the patients positive cytology may still indicate shorter survival. Several recently published studies suggest that peritoneal cytology findings correlate with risk for recurrence and death due to cancer above that indicated by stage alone.

Peritoneal washings remain a simple yet effective tool in the evaluation and management of gynecologic malignancies.

Primary Central Nervous System Lymphomas: A Clinicopathologic Study with Immunohistochemical Evaluation for BCL-2 and P53 Gene Expression in Immunocompetent and AIDS Patients

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Primary central nervous system lymphomas (PCNSL) account for approximately 2% to 6% of all primary brain tumors with higher reported frequency in patients with acquired immunodeficiency syndrome (AIDS). Recent studies have shown that the incidence of PCNSL is increasing. Nearly all of these tumors are high-grade, and are characterized by diffuse proliferation of large B cells. These tumors are believed to be biologically distinct from their systemic morphologic counterpart, large cell non-Hodgkin's lymphoma. The presence of the Epstein Barr virus has been detected in more than 80% of AIDS-related PCNSL cases. The prognosis remains poor even though some reports have shown long-term survival in a small cohort of cases.

In this study we reviewed the clinical history, radiographic findings, histology, immunophenotype, and bcl-2 and p53 gene expression in seven cases of PCNSL. All cases were diagnosed as diffuse large B cell lymphomas. Five cases were those of PCNSL in immunocompetent patients and two were AIDS-related PCNSL. All of these patients presented with neurological complaints. Six patients had supratentorial tumors and one had PCNSL involving the cerebellum. Five of these patients had the diagnosis established on incisional stereotactic biopsy, one on subtotal resection, and one on total resection of the tumor. Five patients underwent postoperative radiation therapy and one received only palliative radiotherapy. Chemotherapy was added to the treatment protocol for two of the five patients receiving radiation treatment. All but one have died of disease; the survival ranged from 12 days to 22 months. No significant difference in survival between immunocompetent and immunosuppressed groups was identified.

The antiapoptotic bcl-2 and tumor suppressor gene p53 expression was studied by immunohistochemical methods where additional tissue material was available. The protein bcl-2 was expressed in all of the immunocompetent cases and one of the two cases with immunosuppression. The protein p53 expression was negative in both subgroups. To obtain statistically significant results, we added our data to the results compiled from four published studies involving expression of these proteins in PCNSL in immunocompetent patients, and to the results of two other studies performed in AIDS-related PCNSL. Fisher's exact test was employed and the significance was defined as a P value of less than 0.05. No significant difference in expression of the two proteins was detected in the two subgroups.

We conclude that PCNSL in immunocompetent and AIDS patients do not demonstrate a difference in immunophenotypic specificity for these two gene products.

Ventilation /Perfusion Mismatch Due to Causes Other than Pulmonary Embolism

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Lung scanning is routinely performed to identify mismatch between ventilation and perfusion images which is usually associated with pulmonary thromboembolism. In medical practice one may encounter mismatch due to conditions other than embolism. Three cases of ventilation/perfusion mismatch caused by abnormal vascular anatomy and bronchogenic cyst are presented.

A 34-year-old female patient complained of chest pain and dyspnea. A lung scan with Xenon 133 gas and Technetium 99m MAA injected into the antecubital vein revealed normal ventilation of both lungs and absent perfusion of the left lung. As a child she underwent a Glenn shunt connecting superior vena cava with right pulmonary and a left Blalock-Taussig anastomosis (left subclavian artery to the left pulmonary artery) for congenital heart disease consisting of tricuspid and pulmonary artery valve atresia with a hypoplastic right ventricle. A repeat perfusion scan with radionuclide injected into a pedal vein showed perfusion to the left lung.

An 18-year-old female had a lung scan performed to evaluate chest pain and shortness of breath. After tracer injection into the antecubital vein, the scan showed absent perfusion to the left lung and normal perfusion of the right lung as well as normal ventilation. She had a hypoplastic right ventricle and pulmonary valve atresia corrected by direct connection of the right pulmonary artery with the superior vena cava and right atrium with the left pulmonary artery (Fontan). After injection of Tc-99m MAA in a foot vein, images showed perfusion to the left lung.

A 27-year-old woman presented with chest pain and dyspnea. The chest X-ray was normal. A lung perfusion scan demonstrated generalized decrease of perfusion to the right lung and a portion of the left upper lobe. Ventilation was normal bilaterally. A computed tomography (CT) scan of the chest performed later demonstrated a hypodense mass in the mid mediastinum (bronchogenic cyst) compressing the right main pulmonary artery.

The list of possible causes of false positive "high probability" lung scans may also include bronchogenic carcinoma, aortic aneurysm, radiation fibrosis, Takayasu's arteritis, and Swyer-James Syndrome.

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Abciximab, Eptifibatide, and Tirofiban: Comparison of Parenteral Glycoprotein IIb/IIIa Inhibitors

ALISHA DUNN, PHARM.D.

GLYCOPROTEIN (GP) IIb/IIIa receptors are expressed on the surface of platelets in response to platelet activation.[1,2] By binding to adhesive proteins such as fibrinogen and von Willebrand's factor, GP IIb/IIIa receptors facilitate platelet aggregation by linking activated platelets together.[1,2]

Platelets may be activated by various stimuli, including collagen, thrombin, thromboxane, epinephrine, serotonin, or adenosine diphosphate.[2,3] The GP IIb/IIIa receptor is the final common pathway leading to platelet aggregation, regardless of the physiologic activator.[1–4] Thrombus formation is a major cause of ischemic complications following percutaneous coronary interventions (PCI), eg, balloon angioplasty. Drugs which inhibit the GP IIb/IIIa receptor, referred to as GP IIb/IIIa inhibitors or GP IIb/IIIa receptor antagonists, inhibit platelet aggregation and are used therapeutically to prevent reocclusion of treated vessels.[2,5] GP IIb/IIIa inhibitors are also useful in the treatment of acute coronary syndromes (ACS), such as unstable angina and non-Q wave myocardial infarction.[6,7] Recent data suggest that GP IIb/IIIa inhibitors may provide benefit when used in conjunction with thrombolytic agents for the treatment of acute myocardial infarction (AMI).[8]

The first IIb/IIIa inhibitor, abciximab (ReoPro®), was introduced in the United States in 1996 and has been widely used in the setting of PCI. In 1998, two additional IIb/IIIa inhibitors, eptifibatide (Integrilin™) and tirofiban (Aggrastat®), became available for use in the U.S. Although they share a common mechanism of action, abciximab, eptifibatide, and tirofiban differ in several respects, including structure, duration of antiplatelet activity, FDA-approved indications, and cost.[4] Table 1 provides an overview of these differences. Abciximab, eptifibatide, and tirofiban are available as parenteral formulations only; the duration of therapy is limited to several days while the patient is in-hospital. Oral IIb/IIIa inhibitors which could feasibly provide long-term platelet inhibition are under investigation.[9]

Pharmacology and Pharmacodynamics

Abciximab is a chimeric monoclonal antibody Fab fragment.[10] Eptifibatide, a synthetic peptide, was developed based on the structure of a compound found in the venom of the Southeastern pygmy rattlesnake.[11] Tirofiban is a nonpeptide tyrosine derivative.[4] Tirofiban and eptifibatide are sometimes referred to as small-molecule IIb/IIIa inhibitors, since their molecular size is small (molecular weight 500–00) compared to abciximab (molecular weight 50,000).[4] Abciximab binds irreversibly to the IIb/IIIa receptor and provides a long duration of platelet inhibition; platelet aggregation remains inhibited for up to 48 hours after discontinuation of abciximab infusion.[4] In contrast, eptifibatide and tirofiban are competitive antagonists of the IIb/IIIa receptor. These drugs exhibit rapid dissociation from the GP IIb-IIIa receptor, allowing restoration of normal platelet function within two to four hours after drug discontinuation.[4]

Clinical Trials

Table 2 summarizes the major clinical trials which demonstrate the efficacy of currently available IIb/IIIa

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The series of Drug Information Updates from Hartford Hospital are provided by the Drug Information Center, Department of Pharmacy Services, Hartford Hospital. Editors: Robert A. Quercia, M.S., R.PH. and Moses Sing Sum Chow, PHARM.D., Editorial Board: D. Drezner, M.D., G. Gousse, M.S., R.PH., R. Quintiliani, M.D., J. Laut, M.D.

Table 1.—Pharmacologic, Pharmacokinetic, and Cost Comparison of IIb/IIIa inhibitors

	Abciximab (ReoPro®)	**Eptifibatide (Integrilin™)**	**Tirofiban (Aggrastat®)**
FDA-approved indications	PCI in patients at high-risk for abrupt closure of treated vessel	ACS, PCI	ACS
Type of compound	Monoclonal antibody Fab fragment	Peptide	Nonpeptide
Receptor antagonism	Irreversible	Reversible	Reversible
Plasma half-life	10–15 minutes	1.5–2.5 hours	2 hours
Duration of platelet-inhibitory effects	Platelet function returns to baseline within 48 hours of stopping drug infusion	Platelet function returns to baseline within 2–4 hours of stopping drug infusion	Platelet function returns to baseline within 2–4 hours of stopping drug infusion
Elimination	Unbound drug rapidly cleared from plasma by proteolytic breakdown	50% renal as unchanged drug and metabolites	65% renal, 25% fecal, primarily as unchanged drug
Dose	PCI: 0.25 mg/kg bolus, then 10 mcg/min x 12 hours. Renal impairment: No specific dosage recommendations.	PCI: 135mg/kg bolus, then 0.5mg/kg/min x 20–24 hours ACS: 180mg/kg bolus, then 2.0mg/kg/min x 72–96 hours. If patient is to undergo PCI, continue infusion for 20–24 hours after procedure. Renal impairment: No dosage adjustment required in patients with mild to moderate renal insufficiency (SCr < 2.0); no specific dosage recommendations for patients with severe renal impairment.	ACS: Bolus 0.4mcg/kg/min for 30 minutes, then continuous infusion 0.1mcg/kg/min x 48–108 hours. If patient is to undergo PCI, continue infusion for 12–24 hours after procedure. Renal impairment: The rate of infusion should be decreased by half for patients with CrCl < 30 ml/min.
*Cost**	$1,327/12-hour infusion	$387/24-hour infusion	$344/24-hour infusion

*Abciximab is approved for use as a 12-hour infusion; longer durations of infusion are not typically used. The duration of infusion with eptifibatide and tirofiban ranges from 20–24 hours if used with PCI or 2–4 days if used for ACS.
ACS, acute coronary syndromes, including unstable angina and non Q-wave myocardial infarction.

inhibitors. Four major trials evaluate these drugs for reduction of death and thrombotic complications in the setting of PCI (EPIC, EPILOG, RESTORE, IMPACT-II).[10,12–14] Because of important differences in study design and patient population, caution must be exercised when comparing results from these trials. The available data suggest that abciximab is superior to both eptifibatide and tirofiban for use as adjunctive therapy during PCI.[4] The relative risk of death, myocardial infarction or repeated revascularization at 30 days was decreased by 30% to 50% in patients treated with abciximab, *vs* 15% to 25% reductions with the small-molecule IIb/IIIa inhibitors.[4] However, in the EPIC study, the risk of major bleeding and the percent of patients requiring blood product transfusions was doubled in patients treated with abciximab compared to placebo; tirofiban and eptifibatide were not associated with excess bleeding in the RESTORE and IMPACT-II trials.[10,13,14] To address the problem of increased bleeding observed in the EPIC trial, a low-dose heparin group was studied in the EPILOG trial.[12] Patients treated with abciximab and low-dose heparin had a risk of major bleeding which was equal to patients treated with placebo and standard-dose heparin.[12] These results suggest that safety with abciximab may be improved without compro-

Table 2.—Selected Clinical Trials with IIb/IIIa Inhibitors

Trial	Population	Treatment	Results
EPIC[10] n=2099	PCI (high-risk only)	Abciximab vs placebo; all patients received non-weight adjusted heparin	Composite endpoint: death, MI, repeated revascularization • 35% RRR at 30 days with abciximab, P=0.008 *vs* placebo • 23% RRR at 6 months, P=0.001 *vs* placebo
EPILOG[12] n=2792	PCI	Abciximab + standard-dose heparin *vs* Abciximab + low-dose heparin *vs* Placebo + standard-dose heparin (all doses of heparin were weight-adjusted)	Composite Endpoint: death, MI, urgent revascularization • 56% RRR at 30 days with abciximab/low dose heparin, P<0.001 *vs* placebo • 54% RRR at 30 days with abciximab/high dose heparin, P<0.001 *vs* placebo • 11.7% RRR at 6 months with abciximab/low dose heparin, P=0.07 *vs* placebo • 13.7% RRR at 6 months with abciximab/standard dose heparin, P=0.04 *vs* placebo
IMPACT-II[14] n=4010	PCI	Eptifibatide vs. placebo; Heparin use not standardized; 75% of patients received heparin	Composite Endpoint: death, MI, repeated revascularization • No significant reduction at 30 days by intention-to-treat analysis • By on-treatment analysis, 22% RRR with eptifibatide at 30 days, P=0.035 *vs* placebo
RESTORE[13] n=2139	PCI	Tirofiban vs. placebo; all patients received heparin	• No statistically significant reduction in death/ MI/repeated revascularization at 30 days
CAPTURE[19] n=1265	USA/PCI	Abciximab *vs* placebo; all patients received heparin	• 29% RRR death/MI/urgent intervention at 30 days, P=0.012 *vs* placebo
PRISM[15] n=3231	ACS	Tirofiban *vs* heparin	• No difference in incidence of death/MI/refractory ischemia at 30 days • Tirofiban associated with 36% RRR death at 30 days, P=0.02
PRISM-PLUS[16] n=1915	ACS	Tirofiban alone *vs* heparin alone *vs* tirofiban + heparin	• Tirofiban + heparin 27% RRR in death/MI at 30 days, P=0.027 *vs* heparin alone
PURSUIT[17] n=10,948	ACS	eptifibatide *vs* placebo; heparin use not standardized	• 9.6% RRR in death/MI at 30 days with eptifibatide, P=0.04 *vs* placebo

RRR–relative risk reduction; MI–myocardial infarction: ACS–acute coronary syndromes; PCI–percutaneous coronary intervention: USA–unstable angina.

mising efficacy, by adjusting the dose of heparin (and also by early sheath removal).[12]

Three large studies examine the role of IIb/IIIa inhibitors in the management of ACS in patients who were not necessarily scheduled to undergo PCI (PRISM, PRISM-PLUS, PURSUIT).[15–17] Both tirofiban and eptifibatide have been associated with small but significant reductions in death or myocardial infarction at 30 days.[15–17] A fourth trial, PARAGON, compared the non-peptide IIb/IIIa inhibitor lamifiban with placebo and found no significant

Table 3.—Major Adverse Effects with IIb/IIIa Inhibitors

Trial	**Major bleeding %**			**Minor bleeding %**			**Thrombocytopenia[a] %**		
	drug	**pla[b]**	***P*-value[c]**	**drug**	**pla[b]**	***P*-value[c]**	**drug**	**pla[b]**	***P*-value[c]**
Abciximab									
EPIC[10]	14	7	<0.01	9	17	NR	5.2	3.4	NR
EPILOG[12]	2.0	3.1	0.19	4.0	3.7	0.81	2.5	1.5	NR
CAPTURE[19]	3.8	1.9	0.043	4.8	2.0	0.008	5.6	1.3	NR
Eptifibatide									
IMPACT-II[14]	5.1	4.8	NS	11.7	9.3	NR	2.6	2.4	NS
PURSUIT[17]	9.3	10.8	NS	7.6	13.1	NR	4.9	4.9	NS
Tirofiban									
RESTORE[13]	5.3	3.7	0.096	NR	NR	NR	1.1	0.9	0.83
PRISM[15]	0.4	0.4	NS	2.0	1.9	NS	1.1	0.4	0.04
PRISM-PLUS[16]	4.0	3.0	0.34	NR	NR	NR	1.9	0.8	0.07

[a] Thrombocytopenia defined as <100,000 cells/mm^3 for EPIC, EPILOG, CAPTURE, IMPACT-II, PURSUIT; <90,000 cells/mm^3 for RESTORE, PRISM, PRISM-PLUS.

[b] Patients randomized to placebo usually also received heparin.

[c] Actual p-values are provided when values were reported in the clinical trials or in product prescribing information.

NS, not significant; NR, not reported; Pla, placebo.

benefit at 30 days; lamifiban is not currently available for use in the U.S.[18] In the CAPTURE study, patients with refractory unstable angina were treated with abciximab or placebo for 18 to 24 hours prior to PCI; this study was terminated early because of favorable outcomes in the abciximab-treated group.[19] Abciximab has not been studied in patients with ACS who were not scheduled to undergo PCI; studies are ongoing to determine the role of abciximab in this setting.[4]

In the recent Thrombolysis in Myocardial Infarction (TIMI) 14 trial, abciximab administered together with low-dose alteplase and low-dose heparin was associated with improved reperfusion in patients with AMI, when compared to standard-dose alteplase and standard-dose heparin.[8] The risk of bleeding was not increased in patients who received abciximab.

Adverse Effects

The major adverse events associated with IIb/IIIa inhibitors in clinical trials are bleeding events and thrombocytopenia.[3] Table 3 provides the incidence of major bleeding, minor bleeding, and thrombocytopenia with IIb/IIIa inhibitors compared to placebo in the major clinical trials. As previously discussed, the incidence of major bleeding was significantly increased in abciximab-treated patients in the EPIC study but not in the EPILOG study, which incorporated a low-dose heparin regimen in the study design.[10,12] No statistically significant increases in the incidence of major bleeding have been observed in eptifabatide- or tirofiban-treated patients compared to placebo in large clinical trials.[3] In general, the incidence of minor bleeding is increased with IIb/IIIa inhibitors compared to placebo.[3] The administration of IIb/IIIa inhibitors increases the risk of bleeding when used concomitantly with heparin, and presumably with other antiplatelet or anticoagulant drugs.[3] No other drug interactions with IIb/IIIa inhibitors have been identified.

Formulary Considerations at Hartford Hospital

For the treatment of ACS, eptifibatide is the formulary agent of choice. If treatment with either tirofiban or eptifibatide has been initiated by a referring institution prior to a patient's admission to Hartford Hospital, treatment will continue with that same agent. For adjunctive therapy with PCI, abciximab or eptifibatide may be used.

Conclusion

As the role of platelet aggregation in the pathophysiology of atherosclerosis, thrombosis, and acute coronary syndromes becomes clear, more therapies are being developed which target the platelet and various pathways of activation. The IIb-IIIa inhibitors represent an important advance in the treatment of patients with coronary artery disease.

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Lyme Disease Vaccine

THE first human vaccine for prevention of Lyme disease (*LYMErix*–SmithKline Beecham), has been approved by the U.S. Food and Drug Administration for use in patients 15 to 70 years old. It is being widely advertised to the general public.

THE DISEASE—Lyme disease is caused by *Borrelia burgdorferi,* a tick-borne spirochete. In North America, more than 90% of cases occur in the Northeast, Middle Atlantic area, and upper Midwest. The highest incidence is in people who live, work, or walk in grassy or wooded areas. The most characteristic finding early in the disease is a skin lesion, erythema migrans, which usually appears three to 30 days after the tick bite. It begins typically as a red macule or papule at the site of the bite and expands over days to weeks, sometimes with central clearing. A flu-like illness, headache, lymphadenopathy, and multiple erythema migrans lesions are also common. Untreated, symptoms may last for weeks to months (Falagas ME, Gorbach SL: *Infect Dis Clin Pract* 1996; 5:217).

A single treatment with antibiotics cures 90% or more of patients with early disease (Loewen PS, et al: *Drugs* 1999; 57:157). Untreated, Lyme disease can cause musculoskeletal, neurologic (Bell's palsy, radiculoneuropathy, meningitis), and cardiac (AV block, arrhythmias, myopericarditis) signs and symptoms, usually weeks to months after the initial infection. These conditions also respond to antibiotics, but require more vigorous treatment and can take much longer to resolve (Nocton JJ, Steere AC: *Adv Intern Med* 1995; 40:69). Six months or more after infection, about 60% of untreated patients develop frank arthritis; a few of these develop chronic arthritis that may be resistant to antibiotic treatment.

THE VACCINE—The Lyme vaccine is made from a recombinant outer surface protein (OspA) of *B. burgdofferi.* Antibodies produced in response to the vaccine destroy spirochetes in the gut of the engorged tick before they can be transmitted.

EFFECTIVENESS—A 20-month double-blind, randomized trial in about 11,000 people 15 to 70 years old living in endemic areas tested three doses of vaccine at zero, one, and 12 months. After two injections, 22 people given the vaccine and 43 given placebo developed definite Lyme disease, making two doses 49% effective. After the third injection, 16 vaccinees and 66 people given placebo developed the disease, making it 76% effective. Three injections were 100% effective in preventing asymptomatic infection. Antibody levels, which rose with vaccination, by eight months after the third injection had fallen to near the lower limit of protective levels (Steere AC, et al: *N Engl J Med* 1998; 339:209).

ADVERSE EFFECTS—The vaccine was well tolerated. The main adverse reaction was soreness at the injection site. Myalgia and a flu-like illness with fever and chills occurred more often than with placebo, usually beginning on the first day or two after vaccination and lasting two to three days. More than 30 days after injection, there were no differences in adverse effects between the two groups. In some patients (who had not been vaccinated), development of chronic antibiotic-resistant Lyme arthritis has been associated with high levels of antibodies to the OspA protein used in the vaccine (Gross DM, et al: *Science* 1998; 281:703; Akin E, et al: *Infect Immun* 1999; 67:173).

ADMINISTRATION—The manufacturer recommends giving the vaccine intramuscularly in three doses at zero, one, and 12 months, but antibody titers have been equivalent when the third injection was given either two or six months after the first dose. Ideally, the third dose should be given in March; the tick season usually begins in April.

COST—The cost to the pharmacist for a single dose of *LYMErix is* $61.25, according to wholesale price (AWP) listings in *Drug Topics Red Book Update,* March 1999.

CONCLUSION—Lyme disease vaccine is effective and has been well-tolerated, but its long-term safety is worrisome, and antibiotics are generally effective in treating early disease and preventing complications. How long vaccination remains protective is unknown; antibody levels suggest that frequent boosters may be necessary. Use of this vaccine should be sharply limited.

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Commentary

A Medical Student's Home Visit

It was not the kind of house you would find, ever, even if you were looking for it.

Off a major state road, it was set back in the woods, the kind of woods that resulted more from overgrowth than anything else. An old car, from the 1950s, was embedded in what remained of the front lawn. It, like the house, looked as if Mother Nature had decided to reclaim the materials for herself.

Mr. W. had left the screen door open for us. As the visiting nurse and I approached, he opened the front door. Standing in an incredibly dirty green worksuit, pants rolled up to his knees, a bright, smiling bearded face greeted us. I had been told that he had cut his own hair, and it looked as such. Grungy blue socks crept up out of what looked like two mud cakes that he had stuck his feet into. Shiny black rubber workman's gloves covered his hands. A mild kyphosis accentuated a slouching posture. Mr. W. didn't look like he was beaten down—more weathered down, like a mountain that had seen too many harsh winds.

His history was remarkable. Reportedly, he had been physically abused as a child by parents who never wanted him in the first place. He had also apparently spent some time in a psychiatric institute; but he has been living at the old shanty, which I found myself standing in, since 1975, when both his parents had died. Mr. W. has not been outside his house since. Aside from a cousin who lives elsewhere in Connecticut, no other family exists. He is 68 years old. The farm which his parents had tended is now his, but it too has been long neglected. For food, a local market delivers groceries. Mr. W. eats only oat grout (I believe that is oats before they are processed into the cereal that we are familiar with), canned salmon, and, occasionally, Breyer's ice cream.

The interior of the house looked like an old farm storage shack that had not been opened in 20 years. All kinds of wood boards, old bedsprings, and other assorted junk were lying around the living room. (I never saw any other room in the house.) There is no running hot water, and Mr. W. never officially showers, although he is obsessive about washing his hands. The smell emanating from, well, everywhere was a dank, musty, acrid odor. He moved well enough to get around all his belongings, shuffling his muddied feet over the creaky wooden floor. A note about his shoes—they looked like sneakers from the early '70s that had been dipped in a mud bath, and then set in a vegetable garden for a few seasons. An organic combination of mold and fungus covered where the shoelaces ought to have been. The structural beams were all rotting. He never opens the windows. The most amazing feature was a calendar from 1975 nailed to one of the door frames. Next to that calendar was one from 1973. They had not been put up for decorative purposes, they had simply never been taken down.

We were there to treat his leg ulcers, deep wounds that had become infected. Reluctant at first to take antibiotics (more on that later), he had taken a course and was now receiving daily wound care. One on each leg, they were deep, but getting healthier. Other than the areas distal to his ulcers, his skin is perfect. No liver spots, no sunspots, no wrinkles. His mental capacity required daily visits to change the bandages. He is slightly incontinent, so he has ripped a hole in the groin area of his worksuit. Mr. W. chooses not to wear any underwear.

To comment on his psychological makeup, he certainly was self-aware and quite intelligent. He knew where he was, why we were there. He also discussed with us some of the things he had been reading (he has a penchant for reading medical journals, the latest from the early 1950s). He said, quite poetically, "Toxemia is the only disease that humans are heir to." He also understood a sophisticated word like frugal. The nurse told me that he has dogmatic ideas about medicine (cf. his reluctance to take antibiotics); he told her that cancer was brought upon humans by their behavior. But, after a few visits, he has acquiesced to her care, although he qualified some nutritional information she gave him as "hogwash."

He was referred to the Visiting Nurses Association by the Department of Protective Services. They were contacted by his cousin who became quite concerned about the condition of his legs. The nurse had him choose a local physician who evaluated his condition. Furthermore, a conservator has been appointed him by the local probate court.

Mr. W. is scheduled to move into a nursing home by the end of the month. He has been trying to organize those belongings he is going to bring with him. He understands that he cannot bring too much, but would like to take his radio and books with him. I have no idea when he was last in an environment were he was constantly around other people—he seemed tolerant, albeit a little bit wary, of my presence, although he did wish me luck with a "top of the morning" valediction.

In sum, Mr. W, to me, comes across as an almost surreal character, a beneficent Ted Kaczynski, or someone like Billy Bob Thornton's tragic figure in the movie *Sling Blade*: a recluse from another era. I have no psychiatric experience, so I suppose this qualifies as the first. It was as if time stopped the day that his parents died. The calendar was hung, and there was no need to change it. I know nothing about his financial situation, other than he is selling his land for a considerable sum of money. He does seem to exude a glimmer of excitement (or at least, anticipation) about going to the nursing home. Hopefully he will find it a better, more stimulating quality of life than he has experienced for the past quarter century.

Medicine allows views of people's lives that would otherwise never be seen. For me, I had only heard about this kind of vision. My experience in visiting Mr. W. made me realize how intrusive and privileged we in medicine are permitted to be.

Michael B. Curi
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50 Years Ago

From *The Connecticut State Medical Journal*

August 1949

Editorials

Foreign Medical Credentials

A large number, no one knows how many, of physicians with European medical education are seeking to migrate to the United States. Many of these fall into the classification of "displaced persons" who are in fact displaced from their own abodes and can not, for political reasons, return to their native lands. Others, particularly indigenous Germans and Austrians, are faced with almost insurmountable difficulties to reestablish themselves in practice and are seeking settlement elsewhere.

Quite properly there is a generous and understanding attitude in America concerning these people, particularly the displaced persons who are being admitted to the United States under special acts of Congress. Many influential persons in America have become interested in the resettlement of individuals among these groups including physicians. There are localities in the United States, especially rural areas in the south and midwest, where it is reported that physicians are needed and it would seem that these newcomers might be of great usefulness in these areas. However, the problem of giving medical licenses to these physicians is a difficult one and must always be answered within the limitations of existing laws and examining board regulations.

United States citizenship is a requirement for licensure in many states and is the chief obstruction to licensure. Next, licensing authorities are confronted with the evaluation of the quality of medical education given in European schools, some of which are practically unheard of in America.

The Council on Medical Education and Hospitals of the American Medical Association is to be commended for the action which it has taken in an attempt to appraise the quality of education given in foreign medical schools. The Council took the leadership in forming a National Committee to concern itself with this subject. The Committee is comprised of representatives from the Council, Association of American Medical Colleges, the State Department, the United States Department of Education, the Rockefeller Foundation, the National Board of Medical Examiners and the Federation of Medical Examining Boards of the United States; the representative from this agency is the Secretary to the Connecticut Medical Examining Board.

In its report to the House of Delegates at the Atlantic City session, the Council stated: "Up to this time the Council on Medical Education and Hospitals has never attempted to classify foreign medical schools. During the past two years it has become increasingly evident to the Council that a reliable and authoritative classification of foreign medical schools should be available to the licensing boards and other official and voluntary agencies in the United States that deal with graduates of foreign medical schools. In the past fifteen years more than 10,000 foreign trained physicians have migrated to the United States and it may be expected in the years ahead that at least 1,000 foreign medical graduates will be coming to this country annually.

"State licensing boards at this time have no way by which they can intelligently evaluate the training of these physicians and determine whether or not they should be admitted to their examination for licensure. As a result, some state boards are excluding all foreign medical graduates from their examinations while others admit all foreign medical graduates to their examinations without regard to the type of education that they have received.

Reprinted from the *Connecticut State Medical Journal*, August 1949.

"After lengthy consideration, the Council believes that the American Medical Association has an obligation to classify foreign medical schools. The Council, therefore, requests authorization from the House of Delegates to establish, after a thorough study of all available information, a list of foreign medical schools that appear to provide adequate educational programs. Such a list will make it possible for state licensing boards to adopt a more intelligent and enlightened policy with respect to foreign medical graduates without lowering the standards of licensure that have been developed for the protection of the public."

The House of Delegates granted this request of the Council and it is hoped in the course of time an authorized list of approved foreign medical colleges will be available.

Cancer Detection by Periodic Examinations

In a recent address Mr. Charles Kettering said, "Instead of one cause of cancer, there may be many causes of cancer and it may take fifty years before all these causes are discovered. During these fifty years and in all probability thereafter, the early detection of cancer will continue to be one of our greatest weapons in the control of this disease." Credit for the first systematic cancer detection examination goes to Dr. Elise L'Esperance, who established such a clinic in 1937 at the New York Infirmary for Women and Children. Another pioneer is Dr. Catherine MacFarlane, of Philadelphia, who with her associates in 1938 established a clinic for the detection of pelvic cancer at the Woman's Medical College of Pennsylvania. The experience of the latter group has been summarized recently by Dr. McFarlane in a current issue (June, 1949) of the *Journal of the Medical Association of Georgia.* Among debatable questions she lists: What age groups shall be examined? How extensive shall the examination be? Shall they be part of a general health examination? Where shall the examinations be made? In hospital clinics? In physicians' offices or elsewhere? Who shall make the examinations? Resident physicians? General practitioners? Groups of specialists? How much shall the examinee pay? Should all or part of the cost be subsidized by the American Cancer Society? Without attempting to answer these pertinent questions in detail, this author states that the value of the Cancer Detection Center having been demonstrated, the responsibility for the cancer detection examination now rests with the general practitioner. She recommends that the general practitioner make such an examination once each year on each of his patients thirty years of age or over. Dr. McFarlane states that the responsibility for much of the indifference to such a program which now exists among general practitioners rests upon present methods of undergraduate and graduate education.

Exhibit Commemorating the Centenary of the Birth of Sir William Osler

July 12, 1949 marked the centenary of the birth at Bond Head in Canada of Sir William Osler, and in observance of this significant anniversary many celebrations have been held throughout this country, Canada, and England. At the Yale Medical Library an exhibit of his writings and some personal memorabilia has been arranged with a particular feeling of gratitude, for the encouragement and help Osler gave Harvey Cushing at the turn of the century played no small part in the building up of the great historical collection which was willed to Yale University at the time of Dr. Cushing's death.

Since Cushing's collecting instincts did not overlook the writings of his friend and mentor, the Yale Medical Library is particularly rich in Osleriana and only a small fraction of the holdings are on display. The materials are shown chronologically, with representative publications from his McGill, Jefferson, Hopkins, and Oxford periods respectively.

A copy of Osler's first printed paper, "Christmas and the microscope," as it appeared in *Hardwicke's Science Gossip* for February 1, 1869, starts off the exhibit, followed by several items from the McGill period which are largely pathological. It has been said of Osler that he entered medicine through the dead house, and it must be recorded that his early pathological reports from McGill are models of close observation and lucid exposition.

The most important single paper from the Philadelphia period was his "Address on the Haematozoa of Malaria," given on October 28, 1886, in which he corroborated the finding of the "germ of Laveran" as the causal agent of malaria.

During the Hopkins period Osler issued a series of distinguished clinical monographs on a wide variety of subjects—angina pectoris, the diagnosis of abdominal tumors, chorea and choreiform affections, carcinoma of the stomach, splenic anaemia, internal secretions, etc. His greatest contribution was of course *The Principles and Practice of Medicine,* first published in 1892, of which in the intervening years fifteen editions have appeared, with 84 separate printings. There have been translations into German, Spanish, French, and Chinese, but the Library lacks the latter two and can display only the German and Spanish translations.

Meanwhile, both in Baltimore and subsequently in Oxford, Osler was becoming as famous for his historical writing as for his professional. He wrote appreciations of a great variety of medical men—the poet Keats, Michael Servetus, Thomas Linacre, Thomas Dover, William Beaumont, Sir Thomas Browner and his general essays included *The growth of truth, Science and immortality, Alan's redemption of man, A way of life* (given at Yale in 1913), *Unity, peace, and concord,* etc.

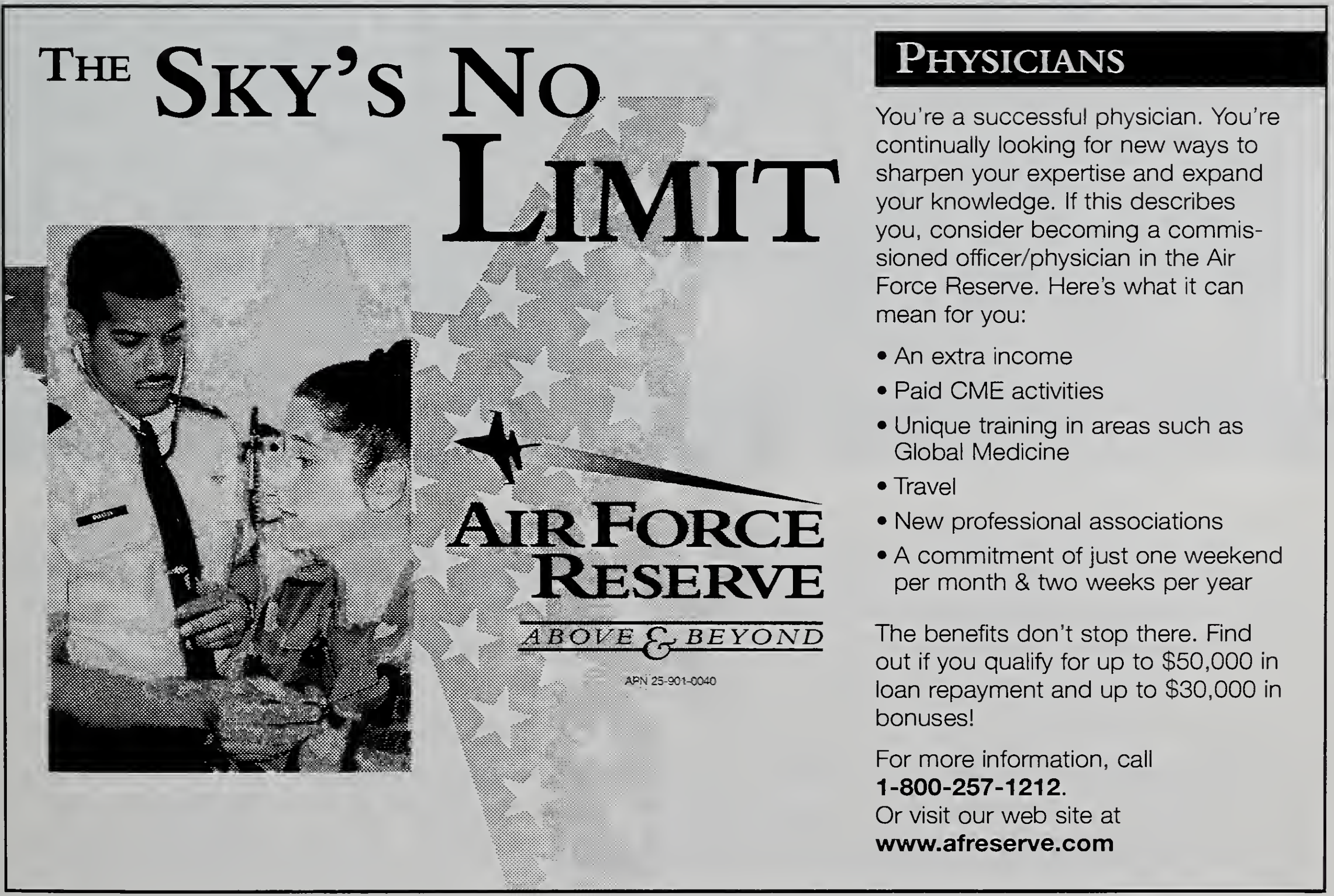
Osler delivered the Silliman Lectures at Yale in 1913, choosing as his subject *The evolution of modern medicine.* Because of the war, the Lectures were not published until 1921, shortly after his death. His most important paper from the Oxford period was his Classical Association Address delivered in 1919— *The old humanities and the new science.* This was subsequently published in the United States by Houghton, Mifflin Company at the behest of Dr. Cushing who wrote a preface for the edition. His final paper was an obituary of Sir Victor Horsley written when Osler was on his death bed.

Osler's great *catalogue raisonne'* of his library, the *Bibliotheca Osleriana,* is on display. He had prepared the way and provided the master plan for the undertaking, but the work was in large measure carried out by his nephew, Dr. W. W. Francis, now Librarian of the Osler Library at McGill University. It is a rich mine of information and an indispensable tool for any physician interested in the history of his profession.

In addition to Cushing's definitive "Life," there are shown various other biographical materials about Osler, notably Mrs. H. F. Reid's shorter work, W. S. Thayer's *Osler and other papers,* Maude E. Abbott's *Classified and annotated bibliography,* etc.

Beside Cushing's two volume "Life" is displayed "The Pope's snuff box"—a silver box given by Monsignor Ratti (afterwards Pius XI) to Rev. H. M. Bannister of Oxford whose sister presented it to Osler on his 70th birthday. Lady Osler passed it on to Dr. Cushing upon his completion of Sir William's Biography, and the children of Mrs. Harvey Cushing have recently presented it to the Historical Library.

The exhibit will be on display into September.



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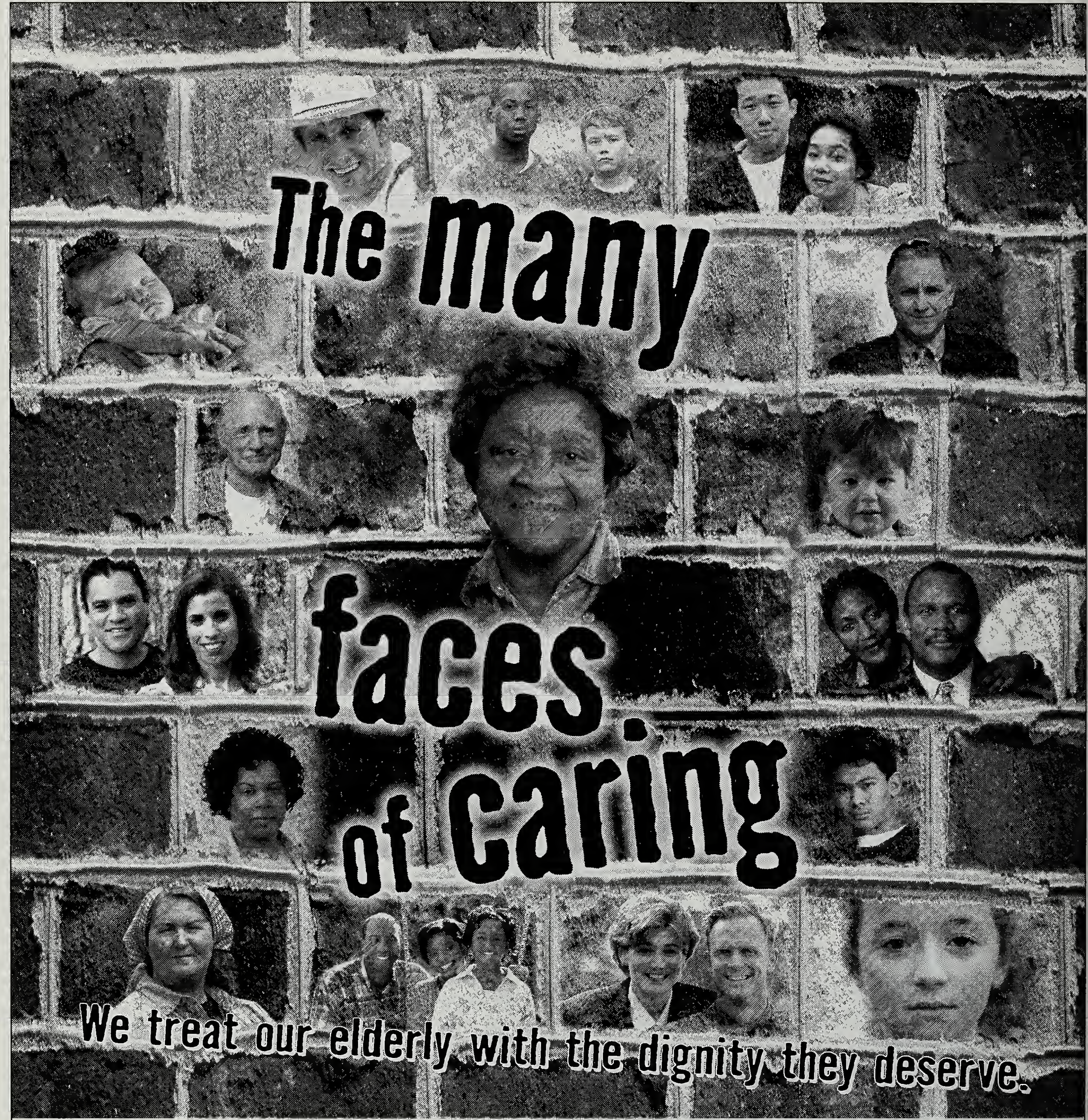
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Dodgeball

Figuratively speaking, it's like watching a gigantic and very unfunny game of dodgeball, with all the players maneuvering on the field to avoid being hit; hit with the bill for graduate and postgraduate medical education. Who will win this serious game, we ask, or more to the point, will our 21st-century physicians and their patients, lose it?

At the turn of the previous century, there was a polyglot system at the graduate level which ran the spectrum from university-based medical schools delivering a respectable M.D. degree to the opportunistic entrepreneur with a diploma print shop nearby, each with a "doctor" to match. The Flexner Report in 1910 signaled the end for the "diploma mill" approach. As a nation, we made a decision when confronted with the question, "What could be more important than having well-educated, well-trained doctors for the populace of our cities and towns?" It seems the answer was, "Not much could be more important than that."

At the postgraduate level, before the logarithmic upward curve of specialization after World War II, training for the practice of medicine took place at university-based teaching hospitals and at major patient care institutions unaffiliated with universities. Research funding and, to some extent, tuitions supported the teaching faculty responsible for postgraduate education at university hospitals. For those who trained at nonuniversity hospitals, patient revenues permitted the hospitals to develop educational programs. The teachers were private practitioners who nurtured their would-be successors motivated by an ageless Hippocratic obligation, and supported by the revenues derived from practice fees. The postgraduate student, blessed with an M.D. degree funded in considerable measure by the sacrifice of his/her proud parents, worked without pay to acquire the practical knowledge and experience essential for entry into the noble practice of medicine.

With the end of World War II the complexities inherent in a scientific-based medicine led many young physicians returning from military duty to seek specialty skills. Many major hospitals with few or no full-time "faculty," and without university connections, established what proved to be quite effective training programs in the general specialties of medicine, surgery, obstetrics/gynecology and some newer, narrower disciplines such as anesthesia, neurosurgery and pathology. Educational responsibilities led these hospitals and medical staffs to seek committed, capable, (even gifted) young residency graduates to join in the teaching endeavors of these institutions to relieve the burdens on busier, older and less science-grounded specialists. These newcomers, not clinically busy in their start-up years, constituted the unheralded core of the "clinical faculty" in nonuniversity teaching hospitals, mentoring young residents in their respective disciplines. In one such major teaching hospital with which I became familiar in the early 1960s, there were 22 surgeons performing a surgical caseload that in a nonteaching hospital could have been provided by about fifteen. This translated to a net aggregate of seven full time teachers distributed within the ranks of volunteer faculty. In time, senior surgeons would slow down and retire, the young faculty would become busier in practice and recruit newcomers to provide the key teaching just as they had done.

After the start of the Medicare program in 1965 a mechanism was found to give fiscal underpinnings to postgraduate education of residents in the major medical disciplines. Direct medical education (DME) funding through Medicare provided for the first time an escape from servitude-for-training with support of salaries for residents that began to look like a living wage. Indirect funding (IME) allowed hospitals to hire full-time department directors with educational responsibilities, build libraries and classrooms and call rooms all of which supported "serious postgraduate education," while still drawing upon the mentoring skills of "clinical faculty" for the hands-on teaching.

The decade of the 1990s has marked the beginning of the reversal of that 25 year success story and the beginning of the treacherous game of dodgeball. Managed care organizations want no part of supporting postgraduate education, neither the hospital component of it nor the practitioners' part. Their panels of specialists are not to be expanded to bring in young teachers with clinical time to spare for mentoring. Further, their bottom-line-based premium structures and the physician remuneration derived therefrom make the sacrifice of time for teaching nearly impossible for "clinical

Continued on next page

faculty" who receive no recompense other than the gratitude of their "students." Our patient-public knows little of this system under siege nor, apparently, do our lawmakers.

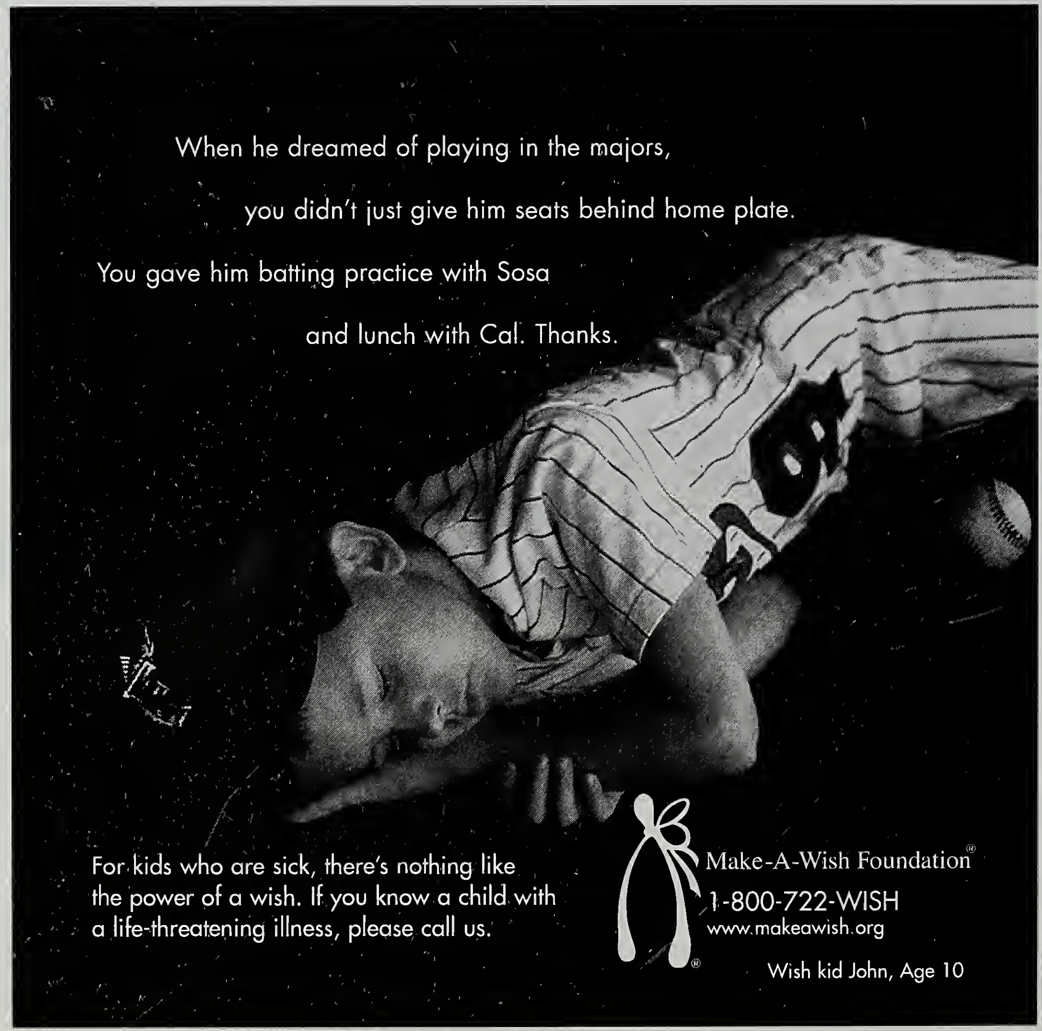
Government leaders bent on "saving Medicare" while voting tax reductions, have targeted IME funding, thus threatening the infrastructure of effective postgraduate teaching programs. Teaching hospitals, deprived of patient-generated revenues to maintain educational programs with full-time teaching positions, will also be deprived by relentless reductions from maintaining and upgrading classrooms, call rooms, computer-based educational vehicles, research and other resources so critical to the production of specialists and generalists for the next century. The shift of much health care out of hospitals to the ambulatory, rehabilitative and long-term care settings, while Medicare support of education remains hospital-based, is an incongruity not yet addressed.

All of the players in the medical-industrial complex are dodging that heavy medicine ball called education—education of medical students and training of graduate M.D.s in their chosen disciplines. Students now borrow money for medical school in contrast to parental support for "another four years." Clinical faculty have lost the cushion that once allowed them to teach "for free"; hospitals are forced by MCOs to discount care below costs, including educational costs. Medicare, it is said, which currently contributes the lion's share to postgraduate education, needs to be "saved" from all this excess spending.

One would hope that when Medicare is "saved" and its subscribers in the next century contact their doctors, they will find at the other end of the line caring, committed, compassionate, educated and well-trained general physicians and specialists. The hope will not be achieved if everyone dodges the "hit."

It is up to all of us to help make this clear to the players and to our patients, the voting public.

H. David Crombie, M.D.
Editor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An Urgent Commentary: The Angst of Integrity

I received a call the other day from a physician who practices in my area. This doctor started a practice here about eleven years ago. From the outset this innovative physician chose to offer patients opportunities and services which, though available, were not yet common in this area. I'm speaking of patient perks such as regularly scheduled evening and weekend hours, even the ability to "walk-in" to the practice for care without an appointment. The practice thrived, and now has six physicians and one supervised physician assistant (PA). The quality of this practice's care is unquestioned. The contribution it has made to the well-being of the community is incalculable.

Then over the past year, and seemingly "out-of-the-blue," two managed care companies that had previously contracted with this group for years, notified the practice that the group could no longer sign contracts directly with the managed care organizations (MCOs). If the practice wished to continue participation, they would first have to join a specified network. In both cases, the network specified was the same. Then a third managed care company, previously uninvolved with this group, invited the practice to join their MCO. When the group attempted to say "yes" to this offer, they were again told that they could contract with the MCO only indirectly, through—you guessed it—the same network! Only one of the three plans offered an alternative. The group could contract with them through a different network. Of course, that network's hospital was out of area!

This group, like most of us, was already extremely displeased with the adhesion contracts that we must sign if we are to participate in managed care plans. These contracts restrict the patient's very ability to see us, to say nothing of the limitations that they place on needed laboratory testing, specialist consultation, hospitalization, surgery, and so forth. These restrictions have a chilling effect upon the quality of medical care that we are "permitted" to deliver by the MCO. And now, this practice was being told that if they were to accept the onerous MCO restrictions, they would have to filter the first restrictive contract through yet a second, further restricted adhesion contract. Impediment piled upon impediment!

Of course this practice faces these corporate behemoths alone. Medical practitioners have absolutely no chance to band together with any other practitioners or groups in order to carry on meaningful, joint negotiations. This is because the government has seen fit to vigorously enforce every jot and tittle of the Sherman Antitrust Act against physicians.

It is no surprise that these adhesion contracts look surprisingly similar, down to the requirement to contract through a network and the specification of the precise network that we are required to use! The very same government that enforces Sherman Act minutiae against doctors has seen fit to exempt the insurance industry, under the McCarren Ferguson Act (1946), from all antitrust considerations!

But wait, there's more. As this group was feeling extreme anxiety from the real possibility of losing a large portion of their practice because of their unwillingness to surrender their principles for the sake of financial expediency, yet another shoe dropped. That shoe was named Aetna.

Aetna, as we all know, is now presenting to all of the physicians in Connecticut something that is euphemistically called an "all-product contract." Under this type of contract, if a practitioner wants to accept one line of what Aetna calls "business," or "covered lives" (and we still call "patients"), then all lines must be accepted. And some of these "lines of business" contain quite onerous contract provisions—provisions so bad, in fact, that in Texas over 400 physicians in one area became so disgusted with the Aetna "all-contract" concept that they dropped Aetna altogether! Here in Connecticut, your Connecticut State Medical Society worked long and hard this past legislative session to pass legislation that would have made this "all-product" contracting illegal. We were unsuccessful this time around. But I assure you, CSMS will be going back —again and again—until we succeed.

Please be assured that organized medicine has not left this medical practice hanging out to dry! The county medical

Continued on next page

association to which these doctors belong has been in constant, supportive communication with them. CSMS has lent moral support, practical legal advice where it can through the CSMS counsel, and, of course, has engaged in active lobbying efforts through our outstanding legislative department. Even the AMA and it's Private Sector Counsel has become involved! But because of the legal barriers that have already been described, the actions of all are severely limited. Indeed, even one of our state governmental offices, which has been particularly active and attentive to patient needs and the patient-physician relationship in general, seems to be in a quandary about what it can do to help all persons concerned in this particular situation.

Because of a dedication to medical ethics and integrity manifested by a firm refusal to accept contracts that are inimical to good patient care, this medical group lives under a cloud of extreme anxiety. They face the very real possibility of economic extinction in the near future because of unfair laws which favor corporate economic interests over good patient care and professional judgment.

What bothers me most about a story such as this—a story that is becoming more commonplace—is that it is becoming quite clear that this country is willing to throw away some of the most skilled, knowledgeable, and experienced older physicians that we have. It is quite content to demoralize and discourage some of the most talented and dedicated of our younger physicians—physicians who are young enough to change professions. And it is willing to do all of this in order to save a couple of bucks. Saddest of all, as we all know, no money is being saved. It's being diverted away from patient care into corporate treasuries and CEO pockets.

Yes, I know the drill. "We spend so much on health care, and yet we are the only advanced country that does not have a universal health care policy." But I also know that when the kings and potentates, presidents, and prime ministers of those "social democracies" become ill, they take the fastest airplane to the United States for treatment. And they are the elite in their own countries! They would undoubtedly receive the best, the most modern care that their countries have to offer! That simple observation says more about the realities of "social democracy universal health care" than any tome compiled by an army of "health care experts!"

We *must* stop this destruction of the unique entity that is modern American Medicine. We must do everything that we can to stop the destruction of the practices of competent, dedicated physicians. And we must persist in this battle until we win. To change federal and state law is difficult. To repeal and modify portions of laws so venerable that they have become legal "habit" over the decades is even harder. But we must do it if the marvelous medical gains of the last 50 years are not to be lost to the patient in the future in the name of so-called "cost-effective care" that for-profit corporations, and government policy wonks, like to peddle.

Before I close this commentary, I must say with sadness that I know there are always a small number of medical practices that are only too willing to pounce on a "targeted" practice such as this one and scavenge it. These predatory practices pretend, as do the hypocritical corporate/government planners, that this is "free market economics." Of course, at the same time they also mumble platitudes such as "to get along you go along." To those few practices I must say, with the words of Samuel Adams,

> If ye love wealth greater than liberty, the tranquility of servitude greater than the animating contest for freedom, go home from us in peace.... Crouch and lick the hand that feeds you; and may posterity forget that ye were our countrymen.

In summary, then, we must acknowledge that these battles:

- to eliminate "all-product contracts,"
- to eradicate adhesion contracts by achieving the rights of joint negotiations and collective bargaining,
- and to modify both the Sherman Anti-Trust and the McCarren-Ferguson Acts, will be difficult. All of us must join together in these efforts with renewed passion and increased vigor. If we don't, we will merely continue to nip at the heels of managed care with endless laws that only serve to modify inconsequential aspects of this monster, much like cosmetic surgery. And if the latter is all we achieve we will, by the inadequacy of our actions, countenance the irreversible loss of gifted practitioners from the medical scene. And those losses will cause irreparable harm to the quality and availability of care for our patients for a long time to come.

We must not allow that to happen because each of us has been charged to "first, do no harm." We must defend our integrity. Ultimately, that is the only way that we can successfully battle and conquer medicine's growing angst.

Stephen R. Katz, M.D.,
President

REFLECTIONS ON MEDICINE

One Hundred Fifty Years Later

ROBERT U. MASSEY, M.D.

ON 12 July our editor called to remind me that our hero, Sir William Osler, had been born this day just 150 years ago at Bond Head in Upper Canada. Since Orangemen in the district were marching and had been told by their clergyman, Featherstone Lake Osler, that his wife had brought forth a brand new son, they dubbed him, to honor their day, the Prince of Orange, and "Hence William he came to be christened," or so wrote Cushing in his great biography.

By 1849 medicine and biology were well on to becoming more than descriptive sciences. That year Thomas Addison described pernicious anemia and adrenal insufficiency, and John Snow declared in a prize-winning essay that cholera was water borne; removing the Broad Street Pump episode came five years later. Cholera, which in 1849 was epidemic from the Ganges to Europe, arrived in New York in May, curiously enough, on Orange Street. There had been revolution in Europe and famine in Ireland, King Louis Philippe had abdicated and Louis Napoleon was now President of France's Second Republic, and Karl Marx had written the *Communist Manifesto.* Five years earlier Samuel F.B. Morse sent a message by telegraph over a line between Washington and Baltimore, and by 1851 Dover and Calais were linked by a submarine cable. Zachary Taylor, hero of the Mexican War, was President. That war had ended in 1848, nine days after the discovery of gold in California.

The years surrounding the mid-century were years in which medical science and biology were coming of age. Think of the events in those years: Crawford W. Long, Horace Wells, W.T.G. Morton, and James Y. Simpson introduced general anesthesia; Ignaz Semmelweis and Oliver Wendell Holmes described the infectious nature of puerperal fever; Hermann von Helmholtz defined the first law of thermodynamics, invented the ophthalmoscope, and measured the speed of nerve conduction, among other things; Claude Bernard described glycogenesis in the liver; Marion Sims operated for vesicovaginal fistula using a speculum that he had invented; the American Medical Association held its first meeting in Philadelphia in 1847; and the American Association for the Advancement of Science was founded in 1848.

Nine years after Osler's birth Charles Darwin published his *Origin of Species*, and the worlds of science, philosophy, and religion have never been the same since. Victorian certainties about God and man were profoundly shaken under the onslaught of Marx, Nietzsche, and Freud.

Fielding Garrison's classic 1929 *Introduction to the History of Medicine*, devoted 389 pages to the story of medicine from the fourth millennium B.C. to 1800 A.D., almost 6,000 years, and 400 pages to the next 130 years! A new edition in 2000, if Garrison's ghost could be called upon to write it, would require at least 400 more pages to cover, even superficially, the past 70 years!

During Osler's lifetime, a physician of reasonable intellectual endowment might easily come to know all that was important in the science and practice of medicine. In fact, he, and by then, she, might also know most of what was worth knowing in biology, chemistry, and physics, and be well enough informed in philosophy, history, mathematics, and religion to enjoy an evening of talk with any professor in the liberal arts college. Most of us know from embarrassing experience that that can no longer happen. We are overwhelmed with information that is incomprehensible, often inconsequential, both in medicine and outside it. Even in our medical schools the basic scientists and clinicians meeting together are limited to talking about institutional politics, sports, and the curriculum. Add a philosopher or English professor under 40 to the crowd and everyone either shuts up or goes for a third martini. Who can manage Foucault or Derrida? Who wants to deconstruct Tolstoy or hear that scientific fact is only a cultural construct?

Even as late as the 1920s and '30s I understood how a telephone worked, my father, a science teacher, built our radios, and we took a 1927 Chevy motor apart, installed new rings and head gasket, reset the carburetor. From him I learned about atomic structure, at least according to Bohr, the periodic table, and the wonders of the benzene ring. Today cell phones, television sets, computers, and automobile engines are black boxes, uninteresting because incomprehensible. Postmodernism, quarks and gluons, quantum theory, curved space, string theory, and the intricacies of genomes are profound mysteries to most of us. Osler, were he to return today, would, after the novelty had worn off, plead to return to the world before the Kaiser's troops invaded Belgium, or better still, to the mansions of his *confessio fidei.*

ROBERT U. MASSEY, M.D., Professor Emeritus, Division of Humanistic Studies, Department of Community Medicine and Health Care, University of Connecticut School of Medicine, Farmington.

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Neil J. Grey, M.D.
Medical Director

Michele R. Norbeck
Director

MEDICAL NEWS CAPSULES

This Month's Reading in Review

TIMOTHY B. NORBECK

Editor's note: During discussions of the Campbell bill (HR 1304) at a hearing of the U.S. Judiciary Committee on June 22, several interesting comments were made. (New Haven physician, Dr. Michael Connair, attended the session in Washington, D.C.) The Campbell bill, legislation that would allow individual physicians to engage in joint negotiation with health plans and a bill that is of paramount importance to physicians and their patients, was attacked by critics as expected. The following are some of the more interesting statements to come out of that important hearing, although the first one referenced is particularly galling, as you will see.

"Over the last decade as managed care has grown, physicians' incomes have increased 77%, with a median income in 1996 of $166,000. During the same time period, the average worker's salary increased by only 43% to $28,480. The Campbell bill, if enacted, would result in up to $80 billion a year in cost increases, and boost the ranks of the uninsured by an additional two million."

Donald A. Young, M.D.,
Chief Operating Officer of the HIAA.
American Medical News (5 July 1999)

"In contrast, the average annual compensation for the 25 top executives in HMO firms is $6.2 million. The average value of their stock options is $13.5 million. If you multiply that by 25, you can buy an awful lot of health care with that."

Response by "Andy" Anderson, M.D., EVP of the AMA, to Dr. Young's inflammatory remarks. Dr. Anderson also questioned the validity of the $80 billion figure quoted by Dr. Young, saying that it came from a study commissioned by and paid for by the health insurance trade group. Dr. Anderson also hit what he called "the repeated allusions to physician compensation" during the hearing, and added that AMA figures indicate that physician incomes have dropped 2% during the past year. *American Medical News* (5 July 1999)

Editor's note: As expected, representatives of the Justice Department (DOJ) and the Federal Trade Commission (FTC) opposed the Campbell bill. Joel Klein, an assistant attorney general with the Justice Department's antitrust division, claimed that the Campbell bill "is the wrong approach to problems raised by managed care and will harm consumers of health care in the future." Robert Pitofsky, FTC chair, called the bill "bad medicine for consumers. A more effective tool," he said, "would be an aggressive patients' bill of rights that gives doctors a meaningful role."

With all due respect to Messrs. Klein and Pitofsky, they have no conception of the magnitude of the problem physicians are now facing. In all my years working in the Federation of Medicine, I cannot ever remember any piece of legislation that was so important to physicians and their patients. The Campbell bill is an absolute must, and organized medicine must embark on a crusade, if necessary, to enact it.

One other issue is very troubling, which emphasizes just how important the Campbell bill is to assure fairness. Despite the tremendous consolidation of health plans (the 18 leading health insurers have combined into six over the past four years), there has been no significant enforcement action taken by the FTC or the DOJ against any health care payer or managed care company. In fact, in January of this year, Robert F. Liebenluft, former assistant director for health care in the FTC's Bureau of Competition, admitted that the federal agencies "had rarely, if ever, challenged an HMO merger." Yes, the Campbell bill is a must!

"The Justice Department's (DOJ) approval last week of the Aetna-Prudential merger shows that Justice is indeed blind. This HMO monopoly will result in a further downsizing of the nation's standard of care based on business, not medical, ethics. Bully Aetna is the avant-garde. We can only hope the courts and Congress do more to protect against HMO consolidations than the Clinton administration, whose patient-rights platform is missing a critical plank."

Jamie Court, Director of Consumers for
Quality Care, on the recent DOJ approval
of the Aetna-Prudential merger.
USA Today (28 June 1999)

Editor's note: The DOJ did approve the merger subject to Aetna's divesting itself of their NYL Care Health Plans in Dallas and Houston. Even by dropping that share of business (500,000 enrollees), however, Aetna will still have a significant presence in Texas—3.6 million enrollees!

"The move toward unionization is a reasonable response to managed care's obsession with 'cost containment' that puts profits over patients. Today patients are

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TIMOTHY B. NORBECK, Executive Director, Connecticut State Medical Society, New Haven.

called ‘consumers,’ physicians are ‘providers,’ and health care is a ‘product’—all terms of commerce, not of a profession, and certainly not of a humanitarian profession. The new vocabulary, and its obvious intentions, is grossly inappropriate. Physicians do not provide inanimate commodities, as sales people and service people do; they treat human beings. They deal with our most precious possession—our health and well-being—and to apply rules of commerce to such activities is unsound, indeed disastrous.

Comments by Michael E. DeBakey, M.D. and
Lois DeBakey in response to the recent decision
of the AMA to form a national labor organization.
Wall Street Journal (7 July 1999)

“In 1997, physicians’ median annual income was $164,000. Physicians work an average of 59.1 hours per week (many work 80 or more hours). They spend a third of their lives in formal education and make $53 an hour on average. One physician paid his attorney $185 an hour, but was allowed only $156 a year to treat a lawyer who was his patient. Why is an income over $100,000 excessive for a physician, but reasonable for airline pilots, railroad engineers and salesmen?”

Further comment by the DeBakeys in that
same WSJ article.

Only in America: “When it comes to frivolous lawsuits, fact can truly be stranger than fiction. *Example:* The Bonaventure Town Center Club in Weston, FL has banned soap in its showers. Why? Lo and behold, people can slip in the shower and then file lawsuits. As the club’s executive director, Bob Fedderwitz, has said, ‘We’ve been sued. We’ve settled. We’ve lost a lot of money.’ So the club has simply turned its showers into soap-free zones. Not only has bar soap been banned but also body wash, shampoo, hair conditioner and even shaving cream. No wonder Americans are increasingly lathered up about lawyers.”

Forbes (5 July 1999)

Cost-saving Purchasing Program for CSMS Members

M.D. Advantage, an affiliate of the Connecticut State Medical Society, and Diversified Network Services Inc. (DNS) are pleased to announce an exciting new **cost-saving** purchasing program. Diversified Network Services Inc. (DNS), the shared services/group purchasing affiliate of the Connecticut Hospital Association, and M.D. Advantage have joined together to provide CSMS members with special pricing on numerous products and services for you and your practice.

There are no membership dues or fees passed along to you or the Society. The Board of Directors of M.D. Advantage has endorsed the program and strongly encourages all CSMS members to evaluate and utilize the program to its fullest extent. Your participation in this program will directly benefit the Society and its activities, based on the agreement with DNS.

In April, the Society mailed to all its members a letter explaining the program, a membership application and a contract index form listing all the vendors that are available to physicians. If you are interested in reviewing any of the vendor savings available to you at no additional cost, please contact Susan Schaffman at the Society, (203) 865-0587.

If you have any questions or require more information, please call DNS at (203) 294-7380, or log onto <www.csms.org> for a direct link to the DNS website <www.dns-ssp.com>.

Letters to the Editor

Letters to the Editor are considered for publication (subject to editing and abridgement), provided that they are submitted in duplicate, signed by all authors, typewritten in double spacing, and do not exceed 1-1/2 pages of text (excluding references). They should not duplicate similar material being submitted or published elsewhere. Letters referring to a recent Journal article should be received within six weeks of the article's publication.

Physicians' Union

Letter to the Editor: Newspapers have been busy reporting and commenting on the AMA's recent decision to form a physicians' union. Most of the reports have been pretty balanced but there have been some statements made in our local newspapers that are misleading.

For example, an editorial in the July 1 issue of the *Connecticut Post* mentioned that "the typical U.S. doctor's income is just below $200,000 a year." When most physicians read statistics like that they laugh and wonder where they originated, or wonder why other doctors are making so much more money than they are. I know that these sorts of statistics come out periodically in trade journals and then are repeated by the media, but I don't know how they get their data. No one from a trade journal ever asked me how much my yearly income is, and if they did I wouldn't tell them anyway. If physicians feel that these statistics are misleading or downright wrong they need to write to the editors and tell them what their personal experience is. It doesn't help physicians' public image if our patients think that we are all making at least $200,000.

The July 6 issue of the Hartford *Courant* reported that the American Association of Health Plans (AAHP) said that if doctors were given the right to unionize, it would drive up costs by giving doctors a "license to collude." As we know, most doctors would not take advantage of the bargaining power that unions would give them. Many would be happy just to eliminate the needless phone calls, referrals, and paperwork for which they had to hire additional office personnel, which increased their office overheads by thousands of dollars yearly, and made their offices inefficient. So we shouldn't feel guilty if our incomes increased with a union because HMO administrative hassles were eliminated, editors should understand that.

Finally, when our newspapers report that the National Labor Relations Board is against physicians' unions because doctors are independent business owners, not employees, is important that we point out why this is not true. For example, HMOs have the authority to "hire" or "fire" physicians, and thus ultimately control physicians' access to patients.

Since most patients are enrolled in HMOs, it is conceivable that a physician could lose his or her ability to make a living if dropped from one or two HMOs. In these circumstances, having a medical license is no longer sufficient for a doctor to practice. Indeed, as far as the individual practitioner is concerned, HMOs have as much authority over his/her right to practice as our state licensing board! Though I don't know of any physicians who have been put out of business, I do know of several who are struggling because HMOs for one reason or another refused them on their panels. Some editors don't fully understand the control over physicians that HMOs have, or the pressure on physicians to accept HMOs' policies rather than risk being terminated.

To say that physicians are independent contractors when they are compelled to work under such conditions is illogical. Editors need to understand the issues better, and physicians are the best ones to educate them. Incidentally, I wrote to the editors of both of the newspapers mentioned.

Edward J. Volpintesta MD
Bethel

CALL FOR PAPERS

Members of the Connecticut State Medical Society reading papers before other organizations are invited to submit their papers to the *Journal* for consideration. Authors preparing manuscripts for submission to *Connecticut Medicine* should consult **Information for Authors**. This is published in most issues of *Connecticut Medicine* or may be obtained from the *Journal* office. Adherence to the instructions will prevent delays both in acceptance and in publication.

Papers prepared on a word processor should be submitted on a diskette along with the hard copy.

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From the Executive Director's Office

COUNCIL MEETING

Wednesday, 30 June 1999

Attendance

Present, in addition to the Chairman, Dr. Hollister, were Drs. Ahamed, Aleali, Beck, Bigos, Bobruff, Conant, C. Czarty, Deren, Eslami, Franklin, Geary, Goodrich, Handelman, Herzog, Katz, Keating, Mansourian, Montegut, Redmond, Sadowski, Scarpa, Sosa, Van Linda, and Wetstone.

Also present were: Mr. Norbeck, Ms. Lindquist, Mr. Brunell, Ms. Morelli, Ms. Norbeck, Ms. Schaffman (all CSMS staff), Mr. Fiorentino (HCMA and NHCMA staff), Mr. Thompson, Ms. Phillips (FCMA staff), Mr. A.Schuman, Mr. M. Schuman (NLCMA, WCMA, MCMA, TCMA staff), Dr. Thompson, Mr. Lalime, and Ms. Mastriano (CSMS-IPA staff).

Absent were: Drs. Brooks, Carolan, J. Czarsty, Galvin, Geist, Maloney, Schwartz, Sindwani, Sridhar, Tesoro, Timmerman, Turner, and Wong.

Organizational Meeting

The organizational meeting of the Council for 1999–2000 was called to order by the president, Stephen Katz, M.D. He expressed his appreciation to Dr. Craig Czarsty for his efforts during his year as President. He welcomed the new and old councilors and asked them to introduce themselves. Dr. Katz then urged Council members to make an effort to attend the meetings of the Council. The dates are published well in advance so that councilors can mark their calendars. He also commented that he was glad to see younger physicians come on the Council. He then asked for nominations for Chair and Vice-Chair of the Council for 1999–2000. It was VOTED to elect Dickerman Hollister, Jr., M.D., Greenwich, Chair, and Michael M. Deren, M.D., New London, Vice-Chair.

Report of the President

Dr. Katz expressed his appreciation to Council members, county association officers, and some members of the House of Delegates who have written to him or called him to offer support, advice and congratulations. He reported on the following issues:

1. Last year the President had a meeting with all county presidents, presidents-elect and executive directors and CSMS counterparts. The subjects most often recommended for discussion were (a) the CSMS-IPA, (b) CMIC, and (c) county-state interface and relationship with regard to AMAP and MD Advantage. Dr. Katz recommended to the Council that the Council set in motion arrangements to allow for one meeting on each of the three items over the course of this coming year. These meetings should be limited to the president, president-elect, and executive director of all county associations and CSMS, together with the president and executive director of the organization under discussion at that meeting.
2. Dr. Katz reported that he had been approached by a urologist requesting CSMS's assistance in facilitating the reactivation of the state CSMS Section on Urology. He, therefore, recommended that the Council vote that it will be CSMS policy to do, at CSMS expense, one announcement mailing, one follow-up mailing, and provide CSMS office space for one organizational meeting for any section that wishes to be reactivated. After the two mailings and one meeting, the section would be financially on its own. The financial implications of this proposal will be addressed by the Fiscal Subcommittee report.
3. Dr. Katz commented on a proposal made by Dr. Wetstone that CSMS become involved in assisting and supporting, both intellectually and financially, an existing UCONN summer fellowship program for college students who are considering careers in medicine. The subject will be discussed by the Fiscal Subcommittee and he recommended that we participate in the program.

He expressed his appreciation to New Haven County Medical Association, its Board of Governors, and particularly Drs. Prasad Sureddi and Isaac Goodrich, for resolving the county and state membership problems that could have resulted from the failed HMO venture.

Report of CSMS-IPA

Kenneth Lalime, Executive Director of the CSMS-IPA, submitted a detailed written report which was distributed with the agenda for the meeting. Mr. Lalime summarized the report submitted which discussed infrastructure development, financial position, progress on the 1999 agreement with PHS, the election process for the 1999 Board of Directors and of pending litigation filed against Foundation Health Systems, PHS, and the IPA by a group of physicians. He stated that he would keep the shareholder apprised of development in this regard.

Dr. David Thompson reported that he disliked not being able to divulge some of the negotiations with PHS that were in a critical give-and-take situation. He was also not free, on advice of legal counsel, to discuss the legal suit. He stated that he welcomed criticism, because criticism informs the Board what needs to be addressed. He reported that managed care is out there and one advantage they have is the IPA to help control what happens. What happens is not always desired, but it is under the IPA control. There are things that have to be done, such as utilization review, identification of up-coding, etc. He stated that he would like to see things get better and believed they were headed in that direction. He asked Dr. Katz for a copy of his critique so that they could review it and determine what could be done to satisfy the issues raised.

In response to questions raised about the legal suit, Mr. Lalime informed the Council that the IPA counsel kept CSMS legal counsel informed of every development.

A question was raised concerning county chapters. Mr. Lalime informed the Council that this had been discussed previously and that the IPA bylaws would be followed in the election process. All county executive directors received information as to the format to be followed. It was reported that the county associations inform those physicians who wish to be considered for election to call the IPA for information and the IPA members within the county would do the voting.

Report of the Executive Director

Mr. Norbeck reported on the following items:

The proposed Aetna merger with Prudential Healthcare is a good news–bad news scenario. The good news is that the Department of Justice and the Texas Attorney General filed a civil antitrust suit against Aetna. The bad news is that all Aetna had to do to get conditional approval of the merger and satisfy the civil antitrust suit against it was to divest itself of its NYL Care Health Plans in Dallas and Houston. Even by dropping that share of business, 500,000 enrollees, Aetna will still have a very significant presence in Texas, 3.6 million enrollees. Aetna's present 16 million subscribers will soon be increased by Prudential's 6.6 million enrollees for a total of 22 million plus enrollees, or one of every 10 Americans. Some have tried to characterize this as some kind of victory for medicine, but the inability and unwillingness of the Department of Justice to do anything makes passage of the Campbell bill absolutely imperative.

The Campbell bill, HR1304, introduced in March by California Republican Representative Tom Campbell and Michigan Democratic Representative John Conyers, would allow physicians to collectively negotiate with health plans on payment rates and patient care issues. Strikes or work slowdowns would not be permitted. The Campbell bill would eliminate any civil or criminal penalties for antitrust cases against health professionals negotiating in good faith. There was a hearing on the bill and the AMA testified at length. Executive Vice President, Dr. Anderson, was criticized for the "high physician income." He responded by saying that a survey of the compensation package of CEOs from the top 25 HMOs equaled an average of 6.3 million dollar a year, plus a 13 million dollar stock option for an average total compensation of 20 million dollars a year. Dr. Anderson went on to say that you could cover an awful lot of health care for that amount of money. Apparently he made his point.

The legislation presently has 126 sponsors, including two from Connecticut (Rosa DeLauro and Jim Maloney). It stands a reasonably good chance of passage in the House, but the Senate will present a formidable challenge to overcome. The CSMS officers are contacting other Connecticut legislators in Washington, and all physicians are urged to contact their representatives. The bill must be passed. The future of the private practice of medicine is very much related to the fate of this legislation. Organized medicine must launch the type of crusade never seen before.

Legislation (SB 1468) entitled the Physician Negotiation Bill was passed by the legislature in Texas in June and was signed into law by Governor George W. Bush. It does not seek an exemption from antitrust laws for independently practicing physicians. Instead it authorizes independently practicing physicians to engage in state-approved negotiations with health plans subject to many restrictions, including active and ongoing oversight by state government. It does not permit independent physicians to organize under the National Labor Relations Act as a union or other labor organizations. Instead it allows physicians to form small groups (up to 10% in area) after approval from the attorney general. Collective bargaining as a union or other labor organization is not allowed. It is a good step forward, but a small one. If permission is granted by the attorney general, the physicians may approach the plan and ask to negotiate contract provision. Except in very special cases, as approved by the attorney general, fees and reimbursement rates are not allowed for discussion. But, the health plan or HMO may choose not to come to the table; they don't have to listen. Negotiations are voluntary and not binding and may be ended at any time by any party. The CSMS Committee on Legislation will want to consider the option of attempting to implement a similar State Action Doctrine, although the legislative and political differences between the two states are huge.

Mr. Norbeck reported that the patient protection legislation in Washington faces major obstacles. Each party is wary of the other getting credit for it. The Texas legislation passed a right to sue HMOs in May of 1997, and only one suit has been filed since then, and that one 17 months later in October 1998. People remain cautiously optimistic about Congress reaching an agreement on managed care reform, but with the election year 2000 looming, "who gets the credit" is the overriding issue, and that doesn't bode well for real reform.

Medicare is very much back in the news, as President Clinton is offering a plan to include prescription drugs for some added premium to the program. Everyone agrees that some effort should be made to help seniors with drug costs. Elderly people use one-third of all prescription drugs sold in the U.S. despite constituting only 12.5% of the population. On average, each Medicare beneficiary has more than 18 prescriptions filled each year, and 15.5 million seniors on Medicare have no coverage for prescription drugs. How much the add on will cost, and who will pay for it will be the focus of this issue, rather than whether it will be done. Some in Congress are pushing for the voucher system to replace the traditional manner of either providing coverage for the $45.50 monthly premium in Part B, or HMO coverage. If they went with the voucher system, however, it would provide great incentive for seniors to go into HMOs, since vouchers would never keep up with future cost increases.

Mr. Norbeck suggested that the Council host a reception for the new Commissioner of Health, Joxel Garcia, M.D., following the August 26 or October 13 Council meeting. It was agreed that the reception would follow the October 13 Council meeting.

Report of AMA Meeting

Dr. Joseph Sadowski, Chair of the CSMS delegation, reported that the 154th Annual Meeting of the AMA was held on 20–24 June 1999. There were over 200 reports and/or resolutions, and the only way the reference committees on these issues can be covered is by assigning members of the delegation to the various reference committees and having them report on the reference committee they attended. He stated that the issue that received the most attention was the AMA House of Delegates' voting to establish a national collective bargaining unit representing employed physicians and some residents. The unit that the House approved will represent employed physicians in the negotiations with hospitals, health plans, and universities concerning employment contracts and patient care. Where allowed, the negotiating unit also will represent residents. Association leaders estimated that such a union could assist up to 108,000, or 17% of the nation's physicians. More than half of the physicians in the United States would not be eligible to join because they are self-employed and thus barred from collective bargaining by antitrust laws.

The importance of the Campbell bill was emphasized because it gives some people the right to negotiate with managed care companies.

Dr. Sadowski covered the Legislative Committee meeting. The big item there was AMA's negotiating with HCFA trying to get rid of the financial incentives which HCFA has tried to establish to get Medicare recipients to report their physicians if they feel they are being improperly billed. Other items that were discussed were the Aetna merger, raising contributions to pension funds because of inflation, which was passed, AMA opposition to non-MD prescriptive ability, AMA opposition to the Inspector General's officers' coming into a physician's office when he or she has been accused of fraud and abuse, and tax credit for free care, which the AMA defeated. Other members of the delegation reported on the various reference committees attended, which included such issues as economic credentialing, ethical issues, confidentiality of patients' records and E&M coding.

It was noted that complete proceedings might be obtained by visiting the AMA website.

Report on Legislation

A comprehensive "End of Session Legislative Report" was distributed with the agenda for the meeting. Mag Morelli highlighted some of the issues and the complete report appears in the June issue of the CSMS *Action News* mailed to the membership. Following discussion of some of the issues, members of the Council were invited to attend the meeting of the Committee on Legislation on July 22 to express their views on some of the issues discussed.

Also enclosed with the agenda was a report from the Department of Social Services relating to the change in amount of Medicare Part B crossover claim payment.

It was VOTED to commend Mag Morelli for the outstanding job she does at the State Capitol on behalf of CSMS.

CSMS-IPA Financial Report

Dr. Beck reported that the CSMS-IPA financial statements for years end were distributed and reviewed by the Fiscal Subcommittee. Dr. Beck reviewed the assets and liabilities as set forth in the report.

Included in the audit is a summation of 1999 changes to the IPA agreement, which are anticipated to improve financial performance. Management believes that the plan of action is progressing favorably and that the most recent financial results indicate that the critical financial and operational measures will be met.

Mr. Lalime responded to questions raised by Council members and stated that he was optimistic that the situation will improve. The report was received as information.

Moment of Silence

A moment of silence was held in memory of Frederick L. Sachs, M.D., Councilor from New Haven County, who died on 20 June 1999.

Workers' Compensation Committee

A statement printed in Chairman Frankl's August-October 1998 edition of *Issues* regarding physician assistants was discussed. The statement in question declares that physician assistants are to be considered "physicians" for the purposes of workers' compensation. It was VOTED to approve the recommendation of the CSMS Committee on Workers' Compensation to contest this statement. The Committee has also decided to review the forms that must be signed by a physician for the workers' compensation patient and ask for a directive from Chairman Frankl to require that all significant forms have a physician's signature or cosignature, not just a physician's assistant's signature.

Pilot Project for Measurement and Feedback of Blood Pressure Control in Patients with Diagnosed Hypertension

Information was received from the AMA on a pilot project for Measurement and Feedback of Blood Pressure Control in Patients with Diagnosed Hypertension. Michele Norbeck discussed the program. The purposes of the proposed pilot project are 1) to evaluate the feasibility of collecting various amounts of clinical data on a large scale from a broad spectrum of practicing physicians within the context of an organized effort to measure and improve quality of care, and 2) to assess comparative advantages and disadvantages of alternative mechanisms for collecting data from, and reporting data to, physicians' offices. States agreeing to participate in this pilot project would be required to recruit physicians to participate in the program. The report was accepted as information, inasmuch as several other states had already agreed to participate in the project.

End-of-Life Project

Dr. Francis Scarpa attended the Educating Physician End-of-Life Conference (EPEC) sponsored by the AMA and the Robert Wood Johnson Foundation. The goal of the seminar was to train 250 physicians throughout the country on "End-of-Life" care. A video film was shown on the subject. Courses have been developed on the subject, and some states are developing programs and sponsoring physicians to take the courses. The issues involved are pain management and goal setting. He suggested that the Fiscal Subcommittee consider the issue of setting funds aside for this purpose and encouraging the membership to avail themselves of the courses given and perhaps develop some type of program in Connecticut to distribute information on the subject.

Committee Appointment

It was VOTED to appoint Catherine Hair, M.D., Monroe, Connecticut to the Committee on Public Affairs.

Dates of Future Meetings

Council Meeting—Thursday, 26 August 1999

Wednesday, 13 October 1999

Semi-Annual Meeting—House of Delegates,
Wednesday, 17 November 1999

IN MEMORIAM

ABBOTT, HOWARD G., State University of New York College of Medicine at Syracuse, 1952. Dr. Abbott retired as a Colonel from the United States Army in 1971. His last military appointment was Chief of Professional Services and Medical Research Project at the U. S. Military Academy, West Point. From 1971 to 1990, he was in a private orthopaedics practice at the Rockville General Hospital and was Chief of the Medical Staff. Active in many state and national orthopaedic organizations, Dr. Abbott was a member of the Tolland County Medical Association where he served as president from 1985 to 1986, the Connecticut State Medical Society where he served on the Committee on the Medical Aspects of Sports and the Committee on Legislation during the 1980s, and the American Medical Association. Dr. Abbott died 5 June 1999 at the age of 73.

BERNSTEIN, LOUIS, Medizinische Fakultät der Universität, Bern, Switzerland, 1936. Dr. Bernstein practiced radiology in Hartford for 38 years. He served as the chief of radiology at Mount Sinai Hospital for 11 years and was a member of the radiology department until his retirement in 1994. In 1952, he started a school for radiology technicians and a nuclear medicine program at Mount Sinai Hospital. He also served as president of the medical staff in 1965. He was a member of the Hartford County Medical Association where he served as a delegate to the Connecticut State Medical Society during the 1960s, the Connecticut State Medical Society where he served on the Committee on Hospitals, and the American Medical Association. Dr. Bernstein died 14 July 1999 at the age of 90.

BLOOM, DAVID I., Tufts University School of Medicine, 1935. Dr. Bloom practiced medicine in Enfield for 58 years retiring in 1994 at the age of 85. He served on the staffs of Mount Sinai Hospital in Hartford and Wesson Women's Hospital in Springfield. He was the athletic physician at Enfield High School and was also the attending physician for the Felician Sisters for many years. Dr. Bloom was a member of the Hartford County Medical Association, the Connecticut State Medical Society, and the American Medical Association. Dr. Bloom died 30 June 1999 at the age of 90.

CUTLER, HENRY J., New York Medical College, 1959. Dr. Cutler practiced medicine in the Waterbury area for 30 years retiring in March of this year. He was associated with Waterbury Hospital and St. Mary's Hospital. He was a member of the New Haven County Medical Association, the Connecticut State Medical Society, and the American Medical Association. Dr. Cutler died 20 June 1999 at the age of 65.

DALGIN, PAUL, State University of New York at Buffalo, School of Medicine, 1968. Dr. Dalgin joined Medical Associates of Stamford P.C. in 1975 as a rheumatologist and internist. In 1995, he became director of the Stamford Therapeutics Consortium. He held various academic appointments and was an attending physician at Stamford Hospital and West Haven Veterans Hospital, and was an outpatient physician at Yale New Haven Hospital. He served on the medical board of the Easter Seals Rehabilitation Center in Stamford. Active in many medical organizations, Dr. Dalgin was a member of the Fairfield County Medical Association, the Connecticut State Medical Society, and the American Medical Association. Dr. Dalgin died 30 May 1999 at the age of 56.

GAUDINEZ, RICARDO F., University of Southern California School of Medicine, Los Angeles, 1989. Dr. Gaudinez was an orthopaedic surgeon with Orthopedic Associates of New Haven, P.C. He was an Associate Clinical Professor in the department of orthopaedics and rehabilitation at Yale University School of Medicine. He was on the medical staff of Yale New Haven Hospital, Hospital of St. Raphael, Milford Hospital, and Griffin Hospital. In addition to the American Academy of Orthopaedic Surgeons and the New England Spine Study Group, Dr. Gaudinez was a member of the New Haven County Medical Association, the Connecticut State Medical Society, and the American Medical Association. Dr. Gaudinez died 22 June 1999 at the age of 35.

KARDOS, JOSEPH A., Jefferson Medical College of Thomas Jefferson University, 1951. Dr. Kardos was an anesthesiologist with Stamford Anesthesia Associates retiring in 1993. He was associated with St. Joseph Medical Center and The Stamford Hospital for 38 years. He was a member of the Fairfield County Medical Association, the Connecticut State Medical Society, and the American Medical Association. Dr. Kardos died 20 June 1999 at the age of 75.

KLUMPP, THEODORE G., Harvard Medical School, 1928. Dr. Klumpp previously maintained a general practice in the New Haven county area. He was a member of the New Haven County Medical Association, the Connecticut State Medical Society, and the American Medical Association. Dr. Klumpp died in September 1997 at the age of 94.

OGILVIE, JOHN B., Yale University School of Medicine, 1934. Dr. Ogilvie retired from the practice of general surgery at Stamford Hospital in 1987. He served as the surgeon-in-chief at Stamford Hospital from 1966 to 1972. Following his retirement, Dr. Ogilvie maintained an association with Yale in its development offices and was the recipient of the first Peter Parker Medal for his outstanding service to the Yale School of Medicine and to medicine. He was a member of the Fairfield County Medical Association, the Connecticut State Medical Society, and the American Medical Association. Dr. Ogilvie died 1 May 1999 at the age of 89.

RUSSOW, ERICH H., Medizinische Fakultät der Universität Rostock, Rostock, Germany, 1934. From 1937 to 1977, Dr. Russow, a cardiologist, maintained a family practice in Queens, New York. After relocating to Connecticut in 1977, Dr. Russow joined the Ridgefield Medical Group where he continued his family practice for seven years. He was a member of the Fairfield County Medical Association, the Connecticut State Medical Society, and the American Medical Association. Dr. Russow died 17 February 1999 at the age of 89.

SACHS, FREDERICK L., Columbia University College of Physicians and Surgeons, 1963. Dr. Sachs, a pulmonologist, was a founding partner of Pulmonary Associates of New Haven.

He was a clinical professor at the Yale University School of Medicine and associate chief of medicine at Yale New Haven Hospital. He was a member of the New Haven County Medical Association where he served as president from 1997 to 1998. From 1998 to 1999 he served as an associate councilor to the Connecticut State Medical Society and from 1993 to 1999 served as a delegate to the Connecticut State Medical Society. He was a member of the Connecticut State Medical Society and the American Medical Association. Dr. Sachs died 20 June 1999 at the age of 61.

TURCO, VINCENT J. SR., Tufts University School of Medicine, 1941. Dr. Turco was the senior attending orthopaedic surgeon at St. Francis Hospital and Medical Center and a professor in the department of orthopaedics at the University of Connecticut School of Medicine. He was the team orthopedist for the Hartford Whalers hockey team for 16 years and also served as the team physician for the Hartford Knights football team and the Hartford Ballet. He was also a physician at the World Gymnastic Championships, the International Figure Skating Championships, and the U.S. Davis Cup matches. He was a member of the Hartford County Medical Association and the Connecticut State Medical Society where he was active on numerous committees from 1962 to 1972. Dr. Turco died 15 July 1999 at the age of 82.

WALZAK, MYRON P., Yale University School of Medicine, 1955. Dr. Walzak joined the University of Connecticut School of Medicine as Professor and Chairman of the Division of Urology in 1981. Prior to that, he was associate professor of urology at the University of Virginia Medial School in Charlottesville. He was the founder of Creighton University Medical School's Department of Urology and was its chairman for 10 years. Upon relocating to the University of Connecticut School of Medicine in 1981, Dr. Walzak served as head of their Urology Residency program where he worked to strengthen and further develop the program. He was involved in the establishment of the Kidney Stone Center at the University of Connecticut Health Center. Upon his retirement in 1996, he was bestowed the honor of Professor Emeritus of Surgery in Urology. He was president of the New England section of the American Academy of Urology. Dr. Walzak was a member of the Hartford County Medical Association and the Connecticut State Medical Society. Dr. Walzak died 23 June 1999 at the age of 69.

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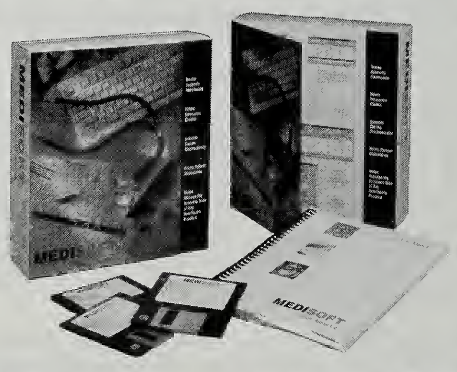

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In the July issue of Connecticut Medicine the article *Improving the Care of Patients with Community-Acquired Pneumonia: A Multihospital Collaborative QI Project* by Mark L. Metersky, M.D., Deron H. Calusha, M.S., and Thomas P. Meehan, M.D. was a reprint with permission from the Joint Commission on Accreditiation of Healthcare Organizations.

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Attention-Deficit/ Hyperactivity Disorder in Children and Adolescents: Rethinking Diagnosis and Treatment Implications for Complicated Cases

FRANK JOHN NINIVAGGI, M.D.

ABSTRACT—Children and adolescents who currently present for treatment frequently carry a principal diagnosis of attention-deficit/hyperactivity disorder in addition to other diagnoses. Many of these cases have long histories, are chronic, and are significantly complicated. Recognition of complicated cases requires rigorous diagnostic differentiation. Effective treatment and sustainable responses require individualized protocols that include integrated psychosocial and psychopharmacological interventions to minimize adverse reactions and enhance quality of life.

Introduction

THIS paper will review the diagnostic classification and address treatment of attention-deficit/hyperactivity disorder (ADHD). The shortsightedness of an exclusive focus on drug treatment is underscored. ADHD is frequently diagnosed. The biologic component of its etiology is strongly emphasized, and drug treatments, usually first-line psychostimulants, are routinely prescribed. This pattern of diagnosing ADHD and the prescription of stimulant drugs may be a stereotyped behavior in pediatric and child psychiatric practice and needs examination. Patients who have been treated for years primarily as ADHD may represent complex combinations of disorders that demand more appropriate comprehensive interventions which may, at times, preclude stimulant drugs.

An integrative clinical overview is presented which regards quality of life as a high priority. Quality of life is reflected in a personal sense of well being and freedom from the impairments that inordinate adverse drug reactions might produce. Much research to date, and the resultant treatment algorithms, is based on group data and statistical analyses. It is suggested that while best treatment practices should consider these group trends, treatment strategies need to be highly patient specific. Treating the patient, and not the numbers, is key.

Psychiatrists, pediatricians, neurologists, primary-care physicians, and other medical specialists may find this more contemporary approach informative, credible, and useful. An examination of customary prescribing practices and possible adverse drug reactions will be addressed. Adverse effects may become significant safety issues. Their masked clinical presentation may further complicate accurate diagnosis and confound treatment efforts, especially those relating to further psychopharmacological interventions. The risk-to-benefit ratio needs careful examination because of its far-reaching consequences over time in this developmentally sensitive juvenile population.

An emerging phenomenon is the increase in the prescription of stimulant drugs especially over the last 10 years. Pharmaceutical companies and large drug chains report the following stimulant choice prescription trends: methylphenidate 75%; dextroamphetamine 10%; Adderall 10%; and pemoline 5%. Significant data indirectly reflecting the rise in psychostimulant use can be found in the Aggregate Production Quotas (APQ) for methylphenidate and amphetamine set by the U. S. Department of Justice, Drug Enforcement Administration (DEA) (Table 1). For example, the APQ for amphetamine in 1998 represented

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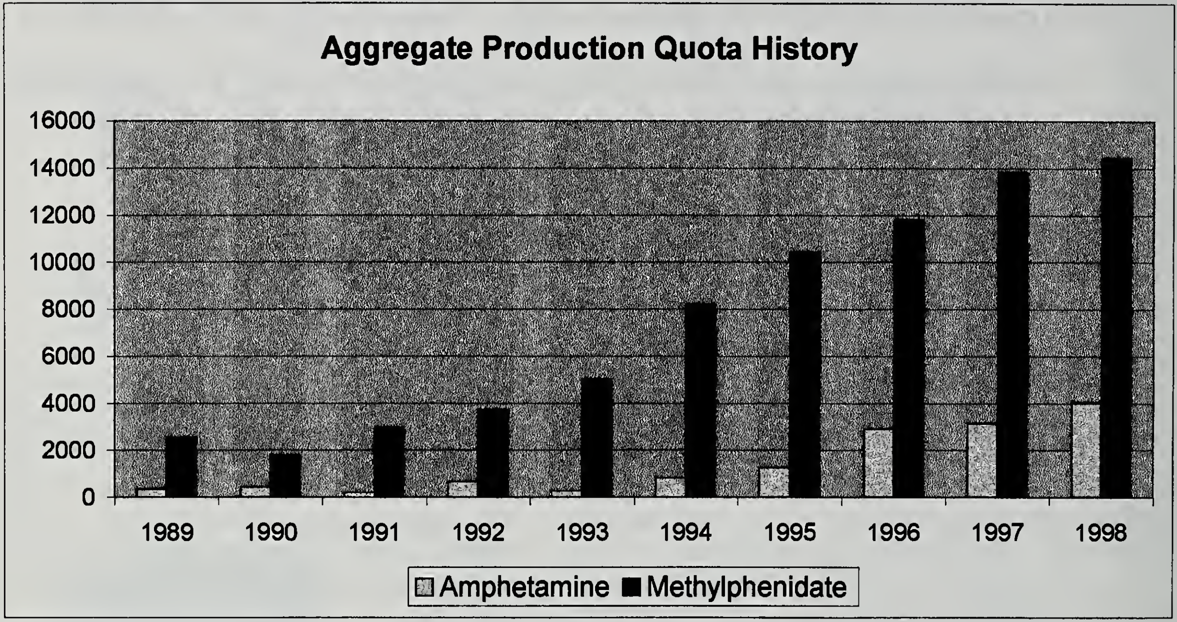
AGGREGATE PRODUCTION QUOTA HISTORY
(in kilograms of anhydrous base)

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	Total
Amphetamine	352	417	168	626	238	787	1226	2880	3137	4037	13868
Methylphenidate	2527	1768	2955	3708	5000	8189	10410	11775.1	13824	14442	74598.1
Amp % Chg from Previous Year		18.47%	-59.71%	272.62%	-61.98%	230.67%	55.78%	134.91%	8.92%	28.69%	
Meth % Chg from Previous Year		-30.04%	67.14%	25.48%	34.84%	63.78%	27.12%	13.11%	17.40%	4.47%	



an increase of about 1,147% from that in 1989. The APQ for methylphenidate in 1998 was increased about 572% from that of 1989 (DEA, 1998, personal communication).

The exact reasons for this are unclear but may relate to refinements in diagnostic assessments, increased communication between mental health professionals, educators, and parents, an increase in psychopharmacological treatment modalities, and the broad impact of the technological milieu creating a mandate for expediency and cost containment.

Diagnosis

Attention-deficit/hyperactivity disorder is a disruptive behavior disorder. Its fundamental diagnostic pillars are grounded in the following core symptom clusters: Inattention and distractibility, impulsivity, and overactivity.[1] Organizational skills, especially important in the classroom setting, are poor. Varied presentations may occur and manifest as predominantly inattentive or as predominantly hyperactive/impulsive, or, when they appear not to meet specific criteria, ie, atypical. The American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders IV* (DSM IV, 1994) delineates further diagnostic parameters that include time frames, pervasiveness, and hierarchical disorder exclusions.[2] In addition to core symptoms, associated behaviors such as problems in academic performance, and social and family functioning are frequent. The valid inclusion of ADHD should reflect its particular contribution to significant impairment and poor functioning in two or more of the aforementioned domains.

Among the variety of biological and environmental correlates, speculation has been advanced that includes genetic, neurotransmitter, perinatal complications, neurostructural, and neuropsychological factors.[3] While a biological grounding is likely, the significance of the experiential world, the psychological grounding of the child and adolescent, must be similarly regarded. The person with ADHD most often suffers because of the impairments that this disorder brings. This multifactorial etiological matrix requires careful diagnostic assessment which underscores a broad range of treatment modalities.

Newly diagnosed cases may have straightforward presentations. Complicated presentations, however, are now common especially where more restrictive levels of care are provided such as in hospitals, partial hospital, and residential facilities. These complicated cases are challenging since accurate diagnosis and combined interventions may not always improve the overall clinical picture.

Complicated cases with some degree of ADHD manifest the core signs of inattention, impulsivity, and hyperactivity in a context of psychosocial dysfunction. Other compounding features may include: comorbidity with one or more Axis I, II, or III diagnoses; a long history (one or two years) with significant impairments that have never been treated; patients who have been treated with one or more psychopharmacological interventions over a long period of time and have become worse or treatment-refractory; and cases in a psychosocial context of inordinate stress. One might also wish to regard as potentially complicated those ADHD cases presenting in other than Caucasian, latency age boys on whom the preponderance of controlled research has been done.

Another common encounter is the presentation of a complicated case with ADHD that includes a constellation of behaviors such as tics,[4,5] and psychotic phenomena such as formal thought disorder, delusions, and hallucinations. In some cases, these symptoms are produced by prescribed psychostimulants. In its discussion of chronic amphetamine and psychostimulant use and abuse, DSM IV, 1994, notes:

> As with cocaine, intense but temporary anxiety, as well as paranoid ideation and psychotic episodes that resemble Schizophrenia, Paranoid Type, are often seen, especially in association with high dose use. Tolerance to amphetamines develops and often leads to substantial escalation of the dose. Conversely, some individuals with Amphetamine Dependence develop a reverse tolerance (sensitization). In some cases, small doses may produce marked stimulant and often adverse mental and neurological effects. p. 206

Manic activation, hypomania, and irritable states may be induced by almost all classes of antidepressants with the possible exception of bupropion.[6] This iatrogenic complication requires careful attention since mood disorders, especially depression, are often encountered in ADHD. Mental disorders with an endogenous etiology must be differentiated from those resulting from pharmacotherapy.

Most research shows that ADHD can coexist with other psychiatric disorders.[7] These include oppositional defiant disorder, conduct disorder, mood disorders, anxiety disorders, learning disorders, and Gilles de la Tourette tic syndrome. Special attention should be given to the real distinction between ADHD and the disorders of learning, the learning disabilities. Whereas ADHD is partially responsive to drug treatment, there is no specific pharmacotherapy for the learning disorders.[8] ADHD is comorbid with conduct disorder in up to 30% to 50%.[9] The presence of conduct disorder itself is an at-risk mediator for the possible development of alcohol and substance abuse problems in adolescence and adulthood.[10]

Some of the impairments that accompany childhood ADHD, particularly attention problems, may endure into adolescence and adulthood. Adolescents are also at increased risk for developing antisocial behavior and possibly substance abuse.[11] ADHD accompanied by conduct problems presents a particular risk for both juvenile and adult criminality.[12] A number of cross sectional, retrospective, and follow-up studies indicate that ADHD children are at risk for antisocial and substance abuse problems, alcoholism, mood and anxiety disorders from childhood into adulthood.[13] Some findings suggest that at least 50% of childhood onset ADHD may persist into adulthood as adult ADHD in partial remission. Although estimates of prevalence vary, about 5% of the school age population is affected, with a preponderance of males to females of about 7:1.

Diagnosis is difficult in the preschooler especially because of the spectrum of growth, maturation, and developmental variations. The five-year-old may present more typically, but it is not until age six with the formal entry into a school setting that the diagnosis becomes more solid. In adolescence, ADHD is marked by extremely poor organizational skills, general restlessness, and a propensity for risky, unsafe behaviors. The mainstay for diagnostic assessment is historical information given by observing, responsible adults and from the interview with the patient. Some assessment scales include: the Conner's Teacher Rating Scales and the Conner's Parent Rating Scales[14] and aspects of the WISC-R: sequential, spatial index, and coding. There is general agreement, however, that there are no current diagnostic scales or tests that can definitively establish the presence or absence of ADHD. It is, therefore, a clinical diagnosis.

Accurate diagnostic evaluation in ADHD, gathered from standard psychiatric clinical assessments, rating scales, and parent and school reports, is based on descriptive, not etiological, findings. A medical history is taken and physical examinations and laboratory tests are reviewed. School reports may include academic performance, behavior charts, and psychological testing. The psychiatric evaluation establishes a diagnosis and elaborates a spectrum of symptoms.

Proper treatment warrants attention to differential diagnosis and the management of multiple diagnoses. Comorbid situations are common. A principal or first diagnosis is the main focus of attention. The principal diagnosis, however, may not necessarily be the central and primary core of the patient's problem.

Differentiating ADHD and mood instability with a consideration of bipolar disorder is another knotty issue. Juvenile mood instability with features of mania might present as irritable or labile mood, pressured behavior or hyperactivity, distractibility, intrusiveness, excessive talking, and generally impaired functioning. Accurately discerning these presentations as either comorbid conditions,[15] ADHD symptomatology, or the iatrogenic windfall from medication is part of the diagnostic assessment. The clinical presentation as the expression of a specific disorder, or of two or more disorders operating together, needs to be delineated. An attempt to differentiate subgroups, subtypes, true comorbidities, and iatrogenic conditions is essential for proper diagnosis and treatment. Stimulant medication, eg, methylphenidate, may aggravate a bipolar disorder with mania developing into a psychosis.

Complicated cases of ADHD not only include those in which ADHD is the principal diagnosis but also those where other principal diagnoses are complicated by the additional presence of ADHD. Complications may arise not only from this intrinsic complexity but also from the psychopharmacological interventions and their possible iatrogenic sequellae. Drug-induced symptom artifacts, therefore, may not be easily distinguishable from more endogenously based disorders. Managing the total person as a discrete unity within a broader, interactive social matrix must always be our fundamental goal. The art and science of psychiatric diagnosis and treatment has never transpired in a featureless vacuum; heterogeneity of clinical presentations is often encountered.

With the above guidelines in mind, psychiatric diagnosis must be grounded in the facts derived from the experience of the patient and the family. Attitudes toward illness, impairment, and medications need to be taken into account. Cultural sensitivity and sensitivity to quality of life issues must be given due emphasis.

Treatment Implications

Comprehensive treatment encompasses both psychosocial, psychopharmacological, and psychoeducational interventions. These are tailored to the needs of the particular child or adolescent in an effort to improve his quality of life. A balanced approach avoids extremes, polarizations, and exclusions and welcomes joint partnerships with the patient, family and caregivers, and all others involved.

Comprehensive therapeutic management begins with the organization of a therapeutic team. Members include psychiatrists, pediatricians, psychologists, nurses, social workers, social service agencies, educators, biological and foster family members, other significant caregivers, and the patient. These joint partnerships foster ongoing communication and shared decision making.

The importance of the psychotherapies cannot be underestimated.[16] Individual attention, group work, family therapy, behavior modification, anger management, and social skills acquisition strategies are some of the essential components of good therapy. Because of the high rate of academic and learning disorders associated with ADHD, solid educational programming is an integral part of treatment. These two interventions, psychotherapies and educational programming, are both necessary and broad in range. As with pharmacotherapy, a full elaboration of the details of these therapeutic components is beyond the scope of the present work.

Pharmacological intervention is another component of rational and comprehensive treatment.[17] The range of useful medications includes psychostimulants (methylphenidate, dextroamphetamine, Adderall), cyclic antidepressants (imipramine, nortriptyline, for example), bupropion, and alpha-2-adrenergic agonists (clonidine, guanfacine). Each class has some efficacy and some typical adverse effects.

The psychostimulants are the most frequently used ADHD medications. They produce increases in alertness and decreased motor activity. A significant drawback is their short duration of action, usually several hours, with no overnight carry-over. Appetite suppression and weight loss, growth suppression, and insomnia are common but reversed when the drugs are stopped. Motor and vocal tic exacerbation is also seen. The induction of psychosis and mania is much more serious but less common. Dysphoria, especially in mood, is especially apparent as medication wears off after several hours. Since the stimulants are short acting, there is a need for repeated dosing throughout the day. As gradual tolerance develops, there is also a regular need for periodic dose increases, and these increases result in proportional increases in adverse effects. In addition, since ADHD is comorbid with conduct disorder in up to 50% of cases, substance abuse issues need to be monitored for the patient and for at-risk family members.

The cyclic antidepressants offer the advantage of being longer acting with fewer complications related to dosage. Disadvantages have centered on cardiac problems and reports of drug morbidities including spontaneous death.[18] Other than bupropion, the antidepressants are known to induce mania and rapid cycling in bipolar patients.

The alpha-2 agonists are effective especially in hyperarousable and irritable ADHD patients.[19] They have a slow onset of action, and their clinical effects appear less robust than the stimulants or the antidepressants. They may be preferable, however, in cases where tic disorders are a concern either in the patient or in the family history. Disadvantages include sedation and possible hypotension.

Other useful medications include mood stabilizers (such as Lithium, valproic acid, gabapentin), neuroleptics, particularly the atypicals which have fewer neurological side effects, beta-blockers (propranolol), and the antihistamines (diphenhydramine, hydroxyzine). These are not first-line ADHD drugs but are used in an adjunctive manner to target specific problems and special circumstances such as mood instability, anxiety, aggression, and agitation.

The aforementioned medication choices are representative of standard prescribing practices. Medication is useful when prescribed judiciously and according to diagnostic and symptom targeting. Beneficial effects and adverse side effects need periodic monitoring, especially in regard to overall quality-of-life issues for the patient and for the family.

Conclusion

The chronic nature of the many complicated cases having ADHD as part of the clinical picture that are now present for evaluation and treatment demands that we develop treatment plans that fully integrate all available psychosocial interventions in conjunction with medication regimens. A new clinical index of caution may need to be established in regard to current practice trends. Whether or not a psychostimulant is the best choice for a complicated case having ADHD must be a conscious, deliberate, and carefully examined decision. The perils of reductionism in drug therapy must be acknowledged and avoided. A leading question then becomes: to what extent do adverse effects compromise healthy growth, maturation, and development? In other words, how is our clinical judgment affecting our patient's quality of life?

Rational treatment must include psychosocial modalities along with judicious psychotropic interventions. The clinical experience of managing our juvenile populations over long periods is providing us with longitudinal follow-up and a newly emerging recognition of negative treatment responses which we are mandated to acknowledge, examine, and correct. The long-term welfare of the children in our care requires our professional craftsmanship to achieve quality and to implement comprehensive services which are flexible, inclusive, health promoting, mutually interdependent, durable over time, and quality-of-life enhancing.

Case Report 1.—VM, an 11-year-old girl in early puberty, entered a psychiatric day treatment program with long-standing diagnoses of bipolar disorder (mixed state with psychotic features), psychotic disorder, not otherwise specified (NOS), ADHD, transient tic disorder, and enuresis. She had an extensive psychiatric past history and multiple inpatient stays, the last being one week earlier. She was living in a foster home. Relevant past history included her birth in Nigeria to a mother with a psychotic disorder, preeclampsia, and premature birth at 37-weeks gestation. Developmental milestones, such as language and motor skills, were normal. Since her mother was unable to care adequately for her, she was brought to the U.S.A. at age two years where she lived with a maternal uncle and his family until about age seven years. Disruptive behaviors from age two years including mood instability, irritability, temper tantrums, intermittent aggression, inattention, and hyperactive impulsivity that necessitated multiple hospitalizations, several foster placements, and, finally, residential placement. There was no history of physical or sexual abuse nor any neurological or medical disease. Target symptoms included pronounced irritability, distractibility, intrusiveness, and a long history of motoric overactivity, impulsivity, disorganized thinking, auditory hallucinations, aggression with peers, facial grimaces, tics, and trichotillomania. Trials of almost a dozen psychotropic medications had been instituted in the past with little improvement. She was admitted to our program on dextroamphetamine 5.0 mg in the morning and at noon. After a thorough diagnostic evaluation, we discussed the case with her foster family and DCF caregivers and decided to discontinue the psychostimulant, wait several days, and observe the patient's clinical status. Baseline blood pressure (BP) and electrogardiogram (EKG) were normal. Height and weight were in the 75th percentile and remained constant. During this time, she received combined psychosocial interventions including individual and group psychotherapy and the daily milieu therapy of a partial hospital program. Although her stay was brief, less than a month, she was drug free for the first time in years, and was given the opportunity to voice some of her concerns and fears about her past experiences and her present awareness of her burgeoning puberty (bodily changes, identity issues, attraction to boys), and to have these listened to and addressed. In addition, a psychotherapeutic management team formulated a more cohesive understanding of her life situation so that comprehensive planning, short- and longer-term, could be made. Her affect brightened, she became more interpersonally responsive and interactive. Her thinking still showed loose associations but no hallucinations. Facial tics and grimaces were still present. To treat her psychosis as well as address her tics, we then began a therapeutic trial of risperidone initiated at the dosage of 0.5 mg/day. After one week, her thinking was noticeably more coherent, facial tics were significantly diminished, and there was no reported or observed aggression. The dosage of risperidone was increased to 1.0 mg/day over several weeks and improvement in targeted symptomatology occurred. Six months after discontinuation of the psychostimulant and the initiation of the neuroleptic, the patient continues to do well without untoward side effects and with the virtual absence of facial tics, grimaces, and hair pulling.

Comment.—The core mental disorder appeared to be a central mood instability with psychotic features. Her long-standing inattention, motoric overactivity, and impulsivity may have constituted some degree of comorbid ADHD. For this child, however, the use of psychostimulants alone or in combination with a neuroleptic, as had been tried in the past, did not mitigate her symptomatology but may have exacerbated her psychosis and contributed to her tic formation and trichotillomania. Use of mood stabilizers were considered.

Case Report 2.—M, a 14-year-old boy, well into puberty, was sent by the school system for a one-time psychiatric consultation to determine his mental status and the appropriateness of his current educational placement in a private school for the learning disabled. The patient was an only child living at home with both parents. The long-standing, admission diagnoses were ADHD, and learning disorders, and recently diagnosed depression. He was taking dextroamphetamine 10.0 mg spansule in the morning and at noon and Prozac 20.0 mg in the morning. Target symptoms included irritability, mood lability, depression, intermittent violent temper outbursts, hallucinations, delusions, facial grimaces, and a general decline in academic performance over the last year. Significant past psychotropic drug history included methylphenidate begun at age seven years old continuing for about one year until tremors developed. At that time, dextroamphetamine was started. In the last six months, Prozac was added. A careful clinical interview with the patient and his mother was performed. A review of all past school and psychiatric assessments was done followed by telephone conversations with school personnel. The prescribing psychiatrist was consulted and it was recommended that all dextroamphetamine and Prozac be discontinued and a therapeutic trial of risperidone begun. After several weeks, his previous target symptoms gradually abated, and continued special education in his school was now feasible.

Comment.—Extensive past history clearly supported diagnoses of ADHD and learning disorders. There was never a history of psychosis, violence, or tics until recently. For about four years, the psychostimulant, dextroamphetamine, was used and was helpful, especially as an adjunct to a highly specialized school program. For the last year or two, however, a psychosis with paranoia, delusions, violent behaviors, and, in addition, tic formations developed. To what extent the chronic administration of dextroamphetamine as well as the addition of Prozac induced these symptoms is unclear, but their discontinuation and the addition of a neuroleptic ameliorated them.

Case Report 3.—JM, a 10-year-old boy, clearly prepubescent, entered a psychiatric day program with an admission diagnosis of ADHD. Since age six years, he exhibited motoric overactivity, impulsivity, inattention and distractibility and was unmanageable in a regular or specialized classroom. His disruptive behaviors extended to the home where his single parent found him unsafe and unmanageable. There was no history of conduct disorder, but some suggestion of short-term sexual abuse. The patient was in residential placement for several years, recently discharged, and now was living at home with mother and siblings. He was admitted on methylphenidate 10.0 mg in the morning and at noon, and 5.0 mg at 3:00 P.M.; and clonidine 0.1 mg in the morning and at bedtime and 0.05 mg at NOON and at 3:00 P.M.. The patient had also been on buspirone but this was discontinued four months previously. Baseline BP and EKG were normal; height and weight were normal but at the low end of average (49-1/2 inches; 55 pounds). The patient was observed on a daily basis for two weeks. Target symptoms included inattention, impulsivity, hyperactivity, inordinate aggression at home, hypervigilance, neck jerking, throat clearing, and stereotyped pulling on his trouser zipper. After many discussions with his single parent and the Department of Children and Family Services caregivers, we discontinued the psychostimulant. Psychosocial therapies included individual, group, milieu, and behavioral therapy with the boy. Ongoing family therapy emphasized psychoeducation about childhood and adolescent development, medications, parent skills training, and behavioral management techniques. After three weeks, he showed no improvement. We then added a time-limited, very small amount of an atypical neuroleptic (risperidone .50 mg by mouth (PO) daily (QD), saw some improvement in one week and then increased it to twice daily. Although amelioration of all symptoms was slow, the patient gradually improved. Three months later, his aggression at home subsided, he was able to attend school without suspensions, his academic performance was considerably improved, he began smiling, and was able to engage in individual psychotherapy with an emphasis more on verbal dialogue than on frenetic activity. Height increased by 1/2 inch and his weight increased by 15 pounds but remained well within a normal range for his stature. Placement in a more restrictive residential or foster setting was thus avoided.

Comment.—This boy most likely had ADHD and post traumatic stress disorder before residential placement at about age eight years. His motor and vocal tic disorder, present on admission, was not previously diagnosed either because it was absent or unrecognized. This case had been considered one of uncomplicated ADHD which was drug (psychostimulant) resistant and required the additional, more restrictive level of care that a residential facility would provide. Since he was on methylphenidate and clonidine for about four years but currently still symptomatic, especially with distressing and impairing tic formations that were becoming more complex, it was considered prudent by us in rethinking his case to taper and to discontinue all psychotropics, to observe, and to shore up the psychosocial interventions. After several weeks, we decided to use a therapeutic trial of a neuroleptic to target his escalating irritability, aggression, and tic formations. A dramatic improvement in all sectors resulted. It has been sustained for over two years.

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Testing Pregnant Women for HIV: A Survey of Obstetricians and Review of Patient Prenatal/ Obstetric Medical Records—Connecticut 1996–1997

AARON ROOME, PH.D, KENNETH CARLEY, DR.P.H., RICHARD MELCHREIT, M.D., GERARD FOYE, M.D., AND JAMES HADLER, M.D.

ABSTRACT—High rates of prenatal testing are needed to identify all HIV-infected pregnant women and prevent transmission to their offspring. To evaluate HIV testing of pregnant women in Connecticut, a survey was conducted in 1998 of licensed obstetricians and a review was performed of 992 randomly sampled prenatal and obstetric medical records for births occurring in 1996. Results of the survey indicated that 78.8% of respondents routinely offered HIV counseling and 76.4% routinely offered HIV testing to pregnant patients in 1997. However, only 44% reported that greater than half of their patients were being tested. Providers who had an HIV testing policy that included HIV-testing unless the patient refused had the highest rate (80.8%; $P < 0.05$). The review of medical records revealed that only 28.8% of women who delivered in 1996 had an HIV test performed during prenatal care. Maternal characteristics associated ($P < 0.05$) with testing included Hispanic ethnicity (51.8% tested), younger age (53.6%, < 20 years old), having Medicaid (48.0%), hospital clinic services (44.6%), and history of intravenous drug use (IDU) (76.9%). Testing rate varied by hospital from 0% to 82.8%. These results indicate that considerable modification of provider and hospital practices and policies is needed to raise HIV screening rates.

Introduction

HIV is transmitted from infected pregnant women to their newborns in utero or during birth. Prospective studies in the United States have shown that without intervention 15% to 25% of children born to HIV-infected women will be infected.[1,2] In 1994, results of the Pediatric AIDS Clinical Trials Group (PACTG) 076 study, demonstrated that use of Zidovudine, when initiated prenatally, continued perinatally, and given to the child postnatally, can reduce the risk of HIV infection in the newborn by 67%.[2]

The HIV-seroprevalence Survey of Childbearing Women (SCBW), conducted nationally and in Connecticut through 1995, revealed that HIV-positive women delivered newborns at a rate of 1.8 per 1,000 births in Connecticut in 1995.[3] Therefore, in Connecticut's 1995 birth cohort of 44,388, it is estimated that 79 HIV-infected women gave birth, with 12–20 of their newborns likely to have become infected in the absence of treatment.

In 1995, the Centers for Disease Control and Prevention published guidelines for HIV counseling and testing of pregnant women.[4] Contrary to previous guidelines that recommended only pregnant women at risk be offered HIV counseling and testing, the 1995 guidelines recommend all pregnant women, regardless of risk, be offered HIV counseling and testing. Based on recent evaluations conducted by the Department of Public Health, it is estimated that as many as 25% of HIV-infected pregnant women in Connecticut are not being detected prior to delivery with current HIV-testing strategies.[5,6]

To evaluate prenatal care provider attitudes and practices regarding HIV testing of pregnant women in Connecticut, the Department of Public Health conducted a survey of obstetricians in 1998 and a confidential review of patient prenatal and obstetric medical records for women

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Table 1.—Survey of obstetricians: Obstetricians testing more than 50% of pregnant patients, by provider's characteristics, Connecticut, 1997.

		Test > 50%			
Provider characteristics	**Total**	**N**	**(%)**	**OR**	**(95% CI)**
Type of testing policy					
Routinely offers test	191	84	(44.0)	ref	
Tests unless patient refuses	26	21	(80.8)	5.4	(1.8–17.0)
Other, not answered	33	5	(15.2)	—	
Practice type					
Private	212	86	(40.6)	ref	
Hospital clinic, CHC, HMO	33	23	(69.7)	3.4	(1.4–8.0)
Not answered	5	1	(20.0)	—	
Years in practice					
≥ 15 years	88	29	(32.9)	ref	
< 15 years	155	79	(51.0)	2.1	(1.2–3.8)
Not answered	7	2	(28.6)	—	
Total	**250**	**110**	**(44.0)**		

who delivered infants in 1996. The specific purposes of these studies were to assess obstetrician HIV-testing policies, to establish the HIV-testing rate among pregnant women, and to characterize both the providers who test and the women being tested.

Methods

Survey of obstetricians.—A questionnaire was developed to assess obstetrician/gynecologist practices concerning testing of pregnant women for infectious diseases including syphilis, rubella, HIV, hepatitis B surface antigen (HBsAg), and group B streptococcus (GBS). Practitioners were asked to report if they provided prenatal care in 1997, their practice setting (private practice, HMO/managed care, community health center, hospital outpatient clinic, VA/military), the hospitals where the majority of their patients delivered, and the number of years they had been in practice.

Practitioners were also asked to characterize their HIV counseling and testing practices, and estimate the percentages of their pregnant patients who received HIV counseling, who were offered HIV testing, and who were tested for HIV. HIV counseling was defined as a discussion about HIV and an opportunity for questions from the patient about HIV risks, perinatal transmission, testing options, and potential benefits and risks of testing. Practitioners were also asked to give their opinions about whether counseling and testing of pregnant women should be mandatory or voluntary, and if HIV-positive findings in pregnant women should be reportable to the state health department.

Questionnaires were mailed to all licensed obstetrician/gynecologists (n = 576) in Connecticut in January 1998. A second mailing was sent in February 1998 to nonresponders. Only respondents who submitted completed questionnaires were included in the analysis.

Several means were used to characterize the 232 nonresponders. The questionnaire included a question enabling provider groups to be represented by a single respondent. Fifty-five respondents indicated that they were representing an additional 87 nonresponding providers. Among the 145 nonrespondents who were not represented, a sample of 30 (21%) were contacted by telephone to determine if they were eligible to participate in the survey. Fifty percent (n=15) were ineligible because they no longer were in practice or did not provide prenatal care.

The crude response rate was calculated as the total number of usable responses divided by the number of questionnaires sent. An adjusted response rate was calculated by subtracting from the study population the providers represented by others (n = 87), the responding providers who did not provide prenatal care in 1997 (n = 94), and the estimated 50% of nonresponding providers found to be ineligible in the telephone survey of licensed physicians (n = 72).

Table 2. —Review of prenatal and obstetric medical records: Evidence of HIV testing of pregnant women during prenatal care, by mother's characteristics, Connecticut, 1996.

		HIV tested			
Mother characteristics	**Total**	**N**	**(%)**	**OR**	**(95% CI)**
Race/ethnicity					
White	604	168	(27.8)	ref	
Black	96	33	(34.4)	1.4	(0.8–2.2)
Hispanic	110	57	(51.8)	2.8	(1.8–4.3)
Other/unknown	59	12	(20.3)	—	
Age					
<20	56	30	(53.6)	ref*	($P < 0.0001$)
20–29	375	129	(34.4)	0.45	
30–40	414	110	(26.6)	0.31	
>40	24	1	(4.2)	0.04	
Source of care					
Private	504	128	(25.4)	ref	
Clinic/CHC	193	86	(44.6)	2.4	(1.6–3.4)
Other/unknown	172	56	(32.6)	—	
Source of payment					
Private	604	151	(25.0)	ref	
Medicaid	198	95	(48.0)	2.8	(2.0–3.9)
Other/unknown	67	24	(35.8)	—	
History of IDU					
No history noted	856	260	(30.4)	ref	
IDU noted	13	10	(76.9)	7.6	(1.9–35.3)
Total	**869**	**270**	**(31.1)**		

*Chi-square test for trend

Review of patient prenatal/obstetric medical records.—An audit was conducted of a sample of hospital medical records of women who delivered in Connecticut hospitals in 1996. Sample sizes were determined for full-term, preterm, and unknown term births within each hospital using the power allocation method and requiring a minimum sample of 20 births per hospital.[7] A total of 993 births were selected for medical record review.

Prenatal and obstetric medical records were reviewed. Information concerning prenatal care included source of care, source of payment for care, number of prenatal visits, and date of first visit. Patient information included age and race/ethnicity. The dates of all HIV, HBsAg, syphilis, and rubella tests were collected. HIV test results were not recorded.

For both the survey of obstetricians and the review of patient medical records, univariate analysis was conducted using standard contingency table analysis. Testing of more than 50% of patients for HIV was the principal outcome of interest for the obstetrician survey, and documentation of HIV testing was the outcome of interest for the medical record review. Odds ratios were used to measure the degree of association between the outcome of interest and other variables. Standard chi-square tests of association and of trend were used. Multivariate analysis was also performed using logistic regression.

Results

Survey of obstetricians.—Five hundred seventy-six questionnaires were sent to all licensed obstetrician/gynecologists in Connecticut. Useable questionnaires were re-

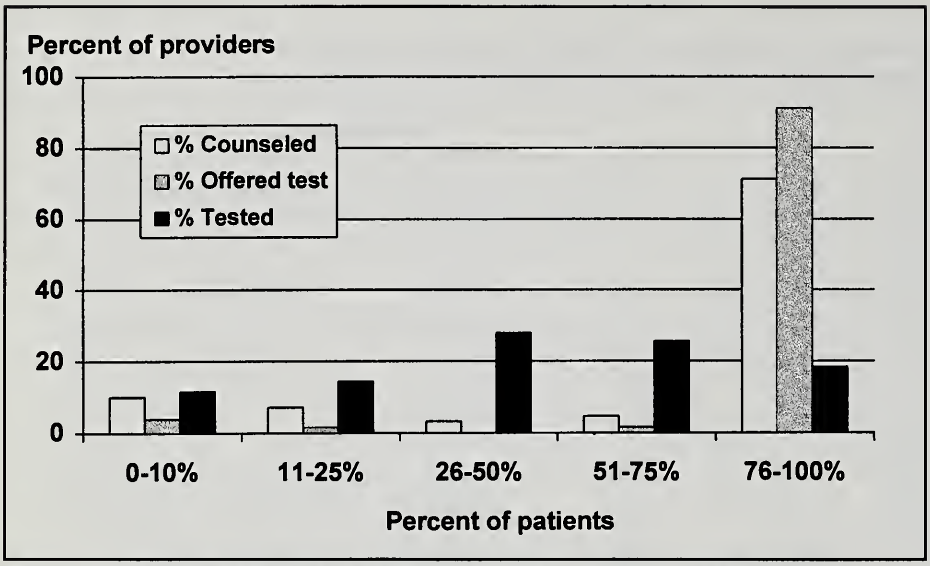
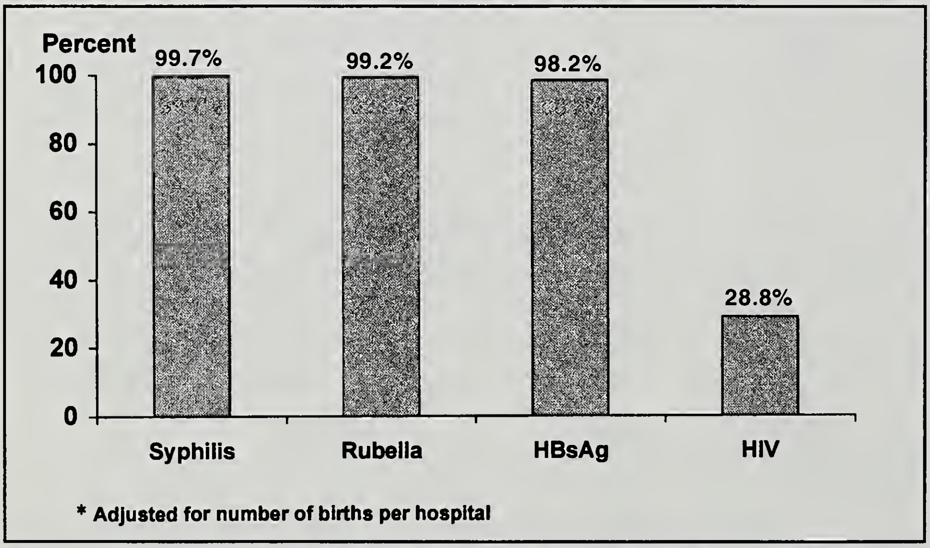


Figure 1.—Obstetrician perceptions about the percentage of their pregnant patients counseled about HIV testing, offered testing, and tested, Connecticut, 1997.



* Adjusted for number of births per hospital

Figure 2.—Percentage* of pregnant women tested for syphilis, rubella antibody, and HBsAg, Connecticut, 1996.

ceived from 344 for a crude response rate of 59.7% (344/576). Among the respondents, 250 (72.7%) indicated that they had provided prenatal care during 1997 and were selected for analysis. After correcting for the number eligible to participate, the number of participants no longer in practice, and for persons who did not participate but were represented by others, the adjusted response rate was 77.4% (250/323).

Prenatal HIV-counseling and testing policies.—Although the majority of respondents routinely provided HIV counseling to their pregnant patients (n=197; 78.8%), approximately one in four respondents indicated they had some other policy. These other policies were to provide counseling only if the patient requested it (n=9; 3.6%), or if a risk assessment indicated it was appropriate (n=17; 6.8%), or to refer the patient elsewhere if necessary (n=10; 4.0%). Twelve (4.8%) had no consistent policy.

Most respondents had a policy of routinely offering the HIV antibody test to pregnant patients (n=191; 76.4%). Some providers had a more assertive policy of routinely performing the test unless the patient refused (n=26;10.4%). The remaining providers had various policies that included testing if the patient requested it (n=7; 2.8%), testing if their assessment of patient risk factors suggested it was appropriate (n=13; 5.2%), referral of patients for testing (n=5; 2.0%), or no consistent testing policy (n=1, 0.4%).

Estimates of the percentage of pregnant patients who received HIV counseling, who were offered the test, and who were tested.—When asked to estimate the percentage of pregnant patients who were being counseled, 178 (71.2%) respondents indicated that greater than 75% of their patients were being counseled about HIV testing (Fig. 1). Similarly, 228 (91.2%) providers offered the HIV test to greater than 75% of their patients. However, only 46 (18.4%) providers indicated that greater than 75% of their patients were being tested and only 110 (44.0%) indicated that they were testing more than half their pregnant patients.

Several provider characteristics were associated with testing more than 50% of pregnant patients including type of HIV-testing policy, type of practice, and number of years in practice (Table 1). Although there were relatively few respondents who tested unless the patient refused, 21 (80.8%) providers with that policy reported testing more than 50% of their patients ($P < 0.05$). Only 84 (44.0%) providers who routinely offer the test indicated that they tested more than half their patients. Similarly, only 86 (40.6%) providers in private practice claimed to be testing more than 50% of their patients, while 23 (69.7%) providers in nonprivate practice settings reported testing more than half of their patients ($P < 0.05$). Years in practice was also a predictor of

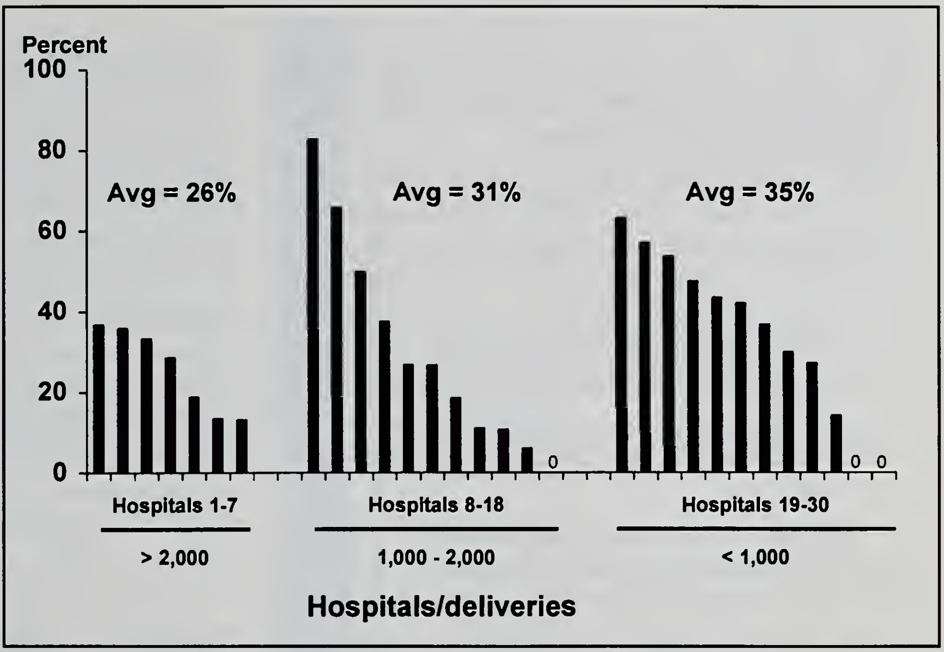


Figure 3.—Percentage of pregnant women tested for HIV prenatally or on admission for delivery, by hospital and number of deliveries in 1996, Connecticut.

testing with providers in practice less than 15 years more likely to report testing more than 50% of their patients ($P < 0.05$). In a multivariate analysis where all three provider characteristics were simultaneously analyzed, having a policy of testing unless the patient refused ($P = 0.0002$) and being in practice less than 15 years ($P = 0.004$) were found to be independent predictors of testing more than 50% of patients while type of practice was not ($P > 0.05$).

Obstetrician attitudes about mandatory counseling, testing, and reporting positive HIV test results to public health departments.—When asked if pregnant women should be counseled about HIV, two thirds of obstetricians (n=169; 67.6%) responded that it should be mandatory. A smaller proportion, (n=53; 21.2%) were in favor of voluntary counseling, or had no opinion (n=28; 11.2%). Providers were essentially split on the type of testing for pregnant women with 118 (47.2%) in favor of mandatory testing and 113 (45.2%) in favor of voluntary testing. Most respondents were in favor of mandatory reporting of HIV-positive pregnant women to public health departments (n=173; 69.2%). Fifty (20.0%) respondents were undecided on the issue and only 27 (10.8%) were opposed.

Review of patient prenatal/obstetric medical records.—Of the 992 records randomly selected for review, 958 (96.6%) were available for review. Of these, 934 (97.5%) included evidence of some prenatal care and of these, 869 (93.0%) included a copy of the prenatal record. The HIV-testing rate for women whose prenatal care records were available was 31.1%. Of the 89 (9.3%) women who did not receive prenatal care or did not have a prenatal record, 10.1% were tested at the time of delivery. There was no significant difference in the testing rate for women having term and preterm deliveries. All subsequent analysis was performed using the 869 records that included a copy of the prenatal record.

The rate of HIV testing was 28.8% after adjustment for the number of births in each hospital. This was much lower than adjusted testing rates found for other infectious diseases including syphilis (99.7%), HBsAg (98.2%), or rubella (99.2%) (Fig. 2). In addition, HIV-testing rates varied widely by hospital from 0% to 82.8%. Although the differences were not statistically significant, hospitals that had the highest number of deliveries had the lowest rates of testing (Fig. 3).

Table 2 shows the HIV-testing rate by maternal and health care characteristics. In a univariate analysis, several maternal characteristics were significantly associated with being tested including Hispanic ethnicity (51.8% tested; $P < 0.05$), younger age (53.6% of < 20 year olds tested; $P < 0.0001$), receiving care in a clinic or at a Community Health Center (44.6% tested; $P < 0.05$), having Medicaid as a payer for services (48.0% tested; $P < 0.005$), and having a history of IDU (76.9%; $P < 0.05$). A multivariate analysis indicated that Hispanic ethnicity ($P = 0.0002$), being less than 20 years of age ($P = 0.0142$), having Medicaid as a payer ($P < 0.0001$), and history of IV drug use ($P = 0.0014$) were independently associated with being tested for HIV.

Dicussion

Recent studies in Connecticut and elsewhere indicate that while there is clear evidence of progress in prevention of perinatal HIV transmission and pediatric AIDS, there is still room for improvement.[8] Importantly, the number of HIV and AIDS cases reported in Connecticut in children less than two years of age decreased from 43 in 1993–1994 to 10 in 1995–1996.[6] While this is encouraging, there is evidence that additional cases may be preventable. In a study of medical records for all 47 children reported exposed to HIV at birth in the Hartford area who were born in 1995–1996, only 60% received optimal treatment with antiretrovirals prenatally, intrapartum, and postpartum.[5] Two of these children were first recognized as having had perinatal exposure six and 11 months after delivery. One was recognized after the child was diagnosed with AIDS. Based on these cases, it is likely that additional children from this birth cohort will be recognized only when symptoms of HIV infection appear.

The Serosurvey of Childbearing Women (SCBW), conducted in Connecticut from 1989 to 1994 found that the rate of births to HIV-infected women declined from a high of 3.3 per 1,000 in 1989 to 1.8 per 1,000 in 1995.[3,9] The SCBW also suggests there are gaps in our knowledge of perinatal HIV in Connecticut. For example, the authors estimate that in 1995, there were 79 births to HIV-positive women in Connecticut. However, only 62 of those births have become known to the Connecticut Department of Public Health.

Of paramount importance in prevention of perinatal transmission of HIV is the timely identification and treatment of HIV-infected pregnant women. The findings of the studies reported here indicate that only 28.8% of pregnant women who delivered in 1996 were tested for HIV. Several specific observations from the two studies suggest that HIV testing of pregnant women in Connecticut is associated with certain provider, patient, and prenatal care environment characteristics. Provider policies that made testing routine unless the patient refused resulted in much higher reported testing rates. In addition, the results of both studies indicate that testing rates are lower in the private practice environment and higher in hospital-based clinics or community health centers. The proportion of women tested varies dramatically by hospital of delivery with larger hospitals, which are situated in the urban areas most heavily affected by HIV, having a rate of testing that is lower than the smaller hospitals.

A limitation of the survey of obstetricians was our inability to make conclusions about the perceptions and practices of nonresponders. We were able to gain insight into the practices of some nonrespondents by analyzing the practices of those who represented them, with no significant differences found. Additionally, the proportion of noneligibles among the nonrespondents could be determined using a telephone survey to providers' offices, allowing us to adjust the response rate. The survey and medical record review were mutually supportive in finding that the HIV-screening rate is low and that certain characteristics (Medicaid enrollee, clinic provider) were associated with higher testing rates.

Several findings from our studies are encouraging and suggest that substantial improvement in testing rates can be achieved. First, testing rates in some demographic groups were much higher than others and in one hospital exceeded 80%. Second, the finding that provider HIV testing policy influences patient acceptance of the test is particularly noteworthy and has important implications for both providers of prenatal care and policy makers. If patients perceive that their providers consider the test important and appropriate, they could be expected to be more accepting of the test. As demonstrated by the recent Kaiser Family Foundation study of women, most patients prefer that the physician broach the subject of sexually transmitted diseases, including HIV.[10]

Given these findings, it is recommended that obstetricians and other providers of prenatal care ensure that all pregnant women are well informed about the benefits of HIV testing. Hospital-based clinics and private practice providers should formally evaluate the manner in which HIV testing is offered to their patients and if the acceptance rate is low (< 75%), consider adopting a stronger policy. All women who are tested should be tested early in gestation in order to afford the woman and her newborn the best opportunity for treatment. Women who have no prenatal care or whose medical records are not available at delivery should be tested on admission to the hospital. Data from several sources demonstrate that therapy first begun intrapartum can prevent 50% of HIV infections.[11,12] Our observation that only 10% of women without prenatal care or prenatal records were tested on admission is unacceptably low.

In the review of medical records presented in this paper, over 95% of pregnant women had been tested for syphilis, rubella, and hepatitis B surface antigen. Of these, only syphilis is a test mandated by law. Rubella and HBsAg testing are recommended and have become an accepted standard of practice. There is no reason why prenatal testing for HIV infection cannot achieve similarly high levels.

Acknowledgments

The authors acknowledge the assistance of Heather Linardos and Monica Rak at the Department of Pubic Health who conducted the medical record reviews and Katherine O'Brien, Respiratory Diseases Branch, National Center for Infectious Diseases (NCID), who contributed to the study design. These studies were supported by the NCID through cooperative agreements with the Connecticut Emerging Infections Program (U50/CCU111188-04) and the Immunizations Program (H23/CCH104484-10).

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Pancreatic Tuberculosis

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ABSTRACT—Tuberculosis of the pancreas is a rare gastrointestinal tract entity. This unusual manifestation of tuberculosis should be included in the differential diagnosis of high-risk patients presenting with a pancreatic mass.

Case Report

A 33-year-old Ethiopian male came to the emergency room with abdominal pain. Physical examination revealed yellow sclerae and midabdominal tenderness to deep palpation. Laboratory studies showed high levels of amylase, alkaline phosphatase, liver enzymes, and total bilirubin. HIV status was negative. An abdominal ultrasound was performed, which demonstrated mild dilation of the common bile duct and a hypoechoic mass in the head of the pancreas (Fig. 1). Computed tomography of the abdomen confirmed the mass (Fig. 2 and Fig. 3). A subsequent endoscopic retrograde cholangiopancreatography (ERCP) showed mild extrinsic narrowing of the distal portion of the common bile duct due to the pancreatic mass.

A gallium scan demonstrated an increased uptake of the radiotracer in the region of the head of the pancreas (Fig. 4).

Elective surgery was scheduled and a frozen section of a lymph node from the peripancreatic region revealed a caseating granuloma. Subsequently, the patient recovered and was discharged with antituberculous therapy.

Discussion

The differential diagnosis of a lesion in the head of the pancreas includes adenocarcinoma which constitutes more than 90% of all pancreatic lesions, although uncommon under the age of 40. Focal pancreatitis, lymphoma, secreting tumors (APUD tumors), sarcoidosis, tuberculosis, and pseudocyst are other possibilities.

Pancreatic involvement is an uncommon gastrointestinal manifestation of tuberculosis. The more common sites of infection include mesenteric lymph nodes, liver, spleen, and intestine.[1] Pancreatic involvement in miliary tuberculosis has been described in only 4.7% of cases.[2] It also has been reported as a solitary lesion in immunocompromised patients.[3] In recent years this unusual disease presentation has been on the rise as expected with the increased incidence of tuberculosis.[4] Some of the clinical manifestations are nonspecific symptoms including fever, fatigue, weight loss, abdominal pain, obstructive jaundice,[5–7] and lobular panniculitis.[8]

The pathogenesis of pancreatic tuberculosis is not well understood, but it is believed that the mycobacterium reaches the pancreas by lymphohematogenous dissemination.[9]

Based on the radiographic findings, the first diagnostic impression in our patient was of a neoplastic process, but the clinical considerations pointed toward pancreatitis or

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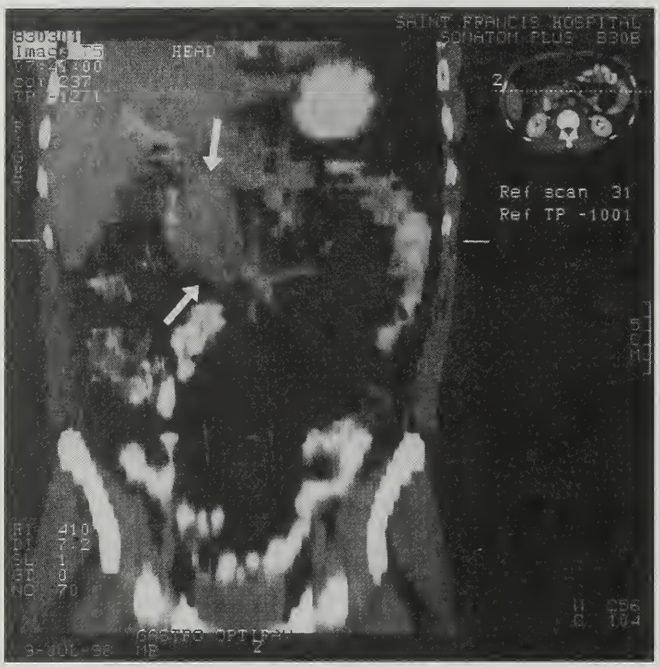

Figure 1.—(left) Sagittal view through the head of the pancreas with hypoechoic mass.

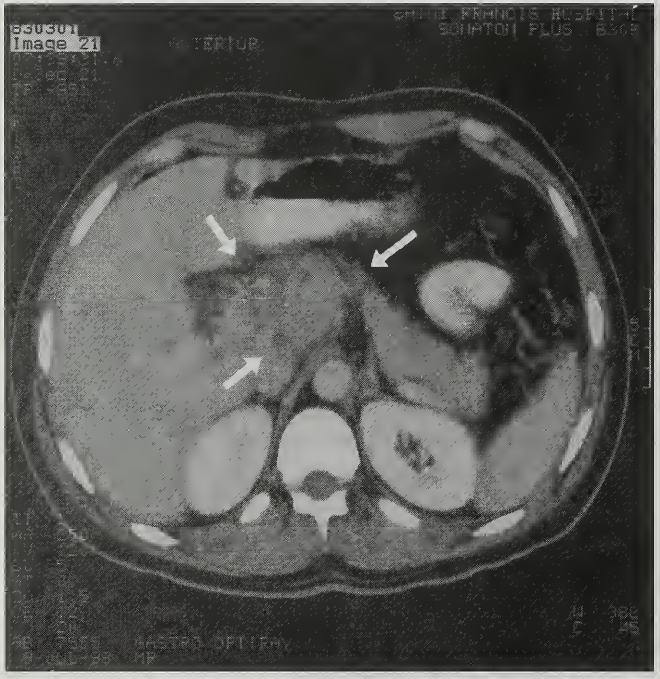

Figure 2.—(left) Axial CT of the abdomen shows the pancreatic mass and adjacent peripancreatic lymph nodes.

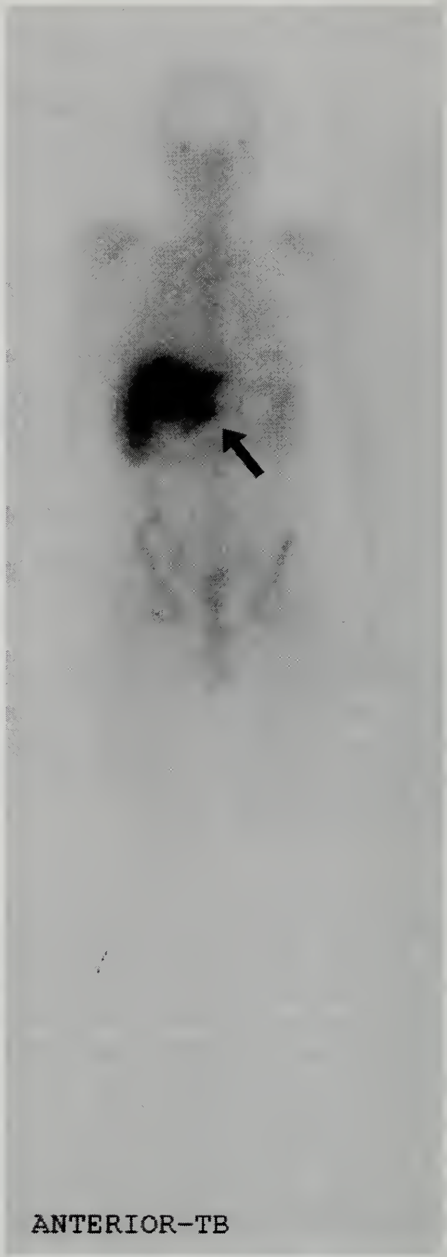

Figure 4.—(above) Anterior view whole body Gallium citrate shows abnormal area of increased radiotracer activity suggesting pathology within the pancreatic region.

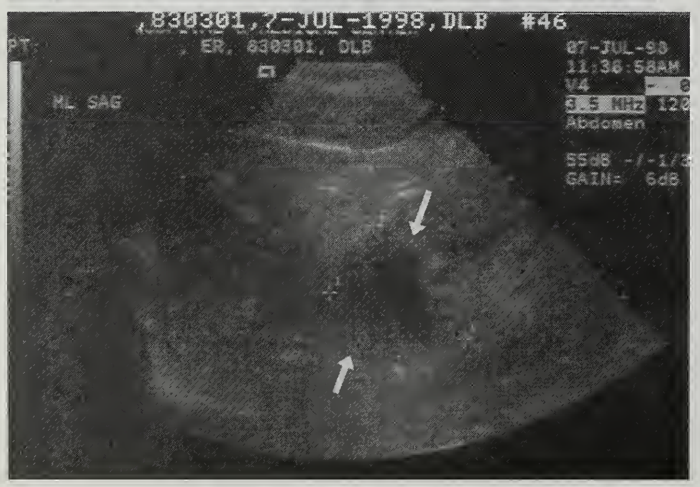

Figure 3.—(left) Coronal CT reconstruction demonstrates pancreatic mass within the duodenal swipe..

peripancreatic abscess. Computed tomography demonstrated enlargement of the head of the pancreas and peripancreatic nodes with no other evidence of disease.

ERCP was not contributory in the diagnostic work-up in this case, but endoscopic ultrasound with lymph node biopsy could be of diagnostic value for the specific diagnosis of this condition.[10] The Gallium scan did not help in the specific differentiation from other inflammatory conditions. With the presence of enlarged lymph nodes surrounding the pancreas, a granulomatous disease (sarcoid or TB) was strongly considered, with the final diagnosis made intraoperatively. The possibility of percutaneous aspiration of enlarged lymph nodes represents a less invasive technique with diagnostic value and lower cost.[5]

In conclusion, the presence of lymph node enlargement in a setting of pancreatitis without other manifestations in a high-risk population may raise the question of pancreatic tuberculosis. Early diagnostic work-up must be done for the appropriate implementation of therapy.

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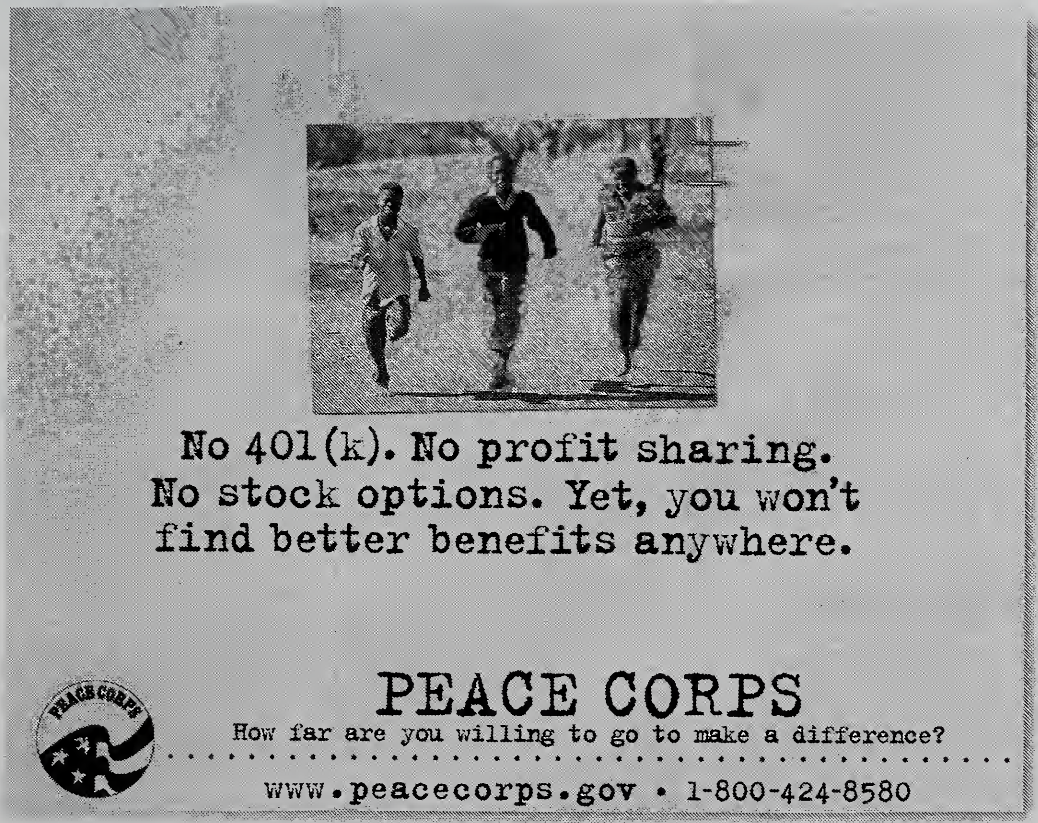

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The Double-Crush Phenomenon—An Unusual Presentation and Literature Review

KHALIQUE S. ZAHIR, M.D., FARRAH S. ZAHIR, M.D., J. GRANT THOMAS, M.D.,
AND STANLEY J. DUDRICK, M.D.

ABSTRACT—The double-crush syndrome was initially described by Upton and McComas in 1973.[1] They postulated that nonsymptomatic impairment of axoplasmic flow at more than one site along a nerve might summate to cause a symptomatic neuropathy.[2] This was suggested by their clinical observation that the majority of their patients had a median or ulnar neuropathy associated with evidence of cervicothoracic root lesions. They also hypothesized that one of the constraints on axoplasmic flow could be a metabolic neuropathy, and this is supported by the high association of diabetes and carpal tunnel syndrome.

Other researchers have since reported series of patients supporting the frequent association of a proximal and distal nerve compression syndrome, including carpal tunnel syndrome associated with cervical radiculopathy, brachial plexus compression, and diabetic neuropathy.

Subsequently, MacKinnon and Dellon have expanded the description of this syndrome to include a) multiple anatomic regions along a peripheral nerve, b) multiple anatomic structures across a peripheral nerve within an anatomic region, c) superimposed on a neuropathy, and d) combinations of the above.[2,3]

We present an unusual case of symptomatic nerve compression caused by two nonanatomic structures within an anatomic region.

Case Report

A 74-year-old female presented with a three-year history of intermittent right hand pain. She described tingling, numbness, and burning along the ring and small fingers, and complained of a pressure-like throbbing sensation which had increased over a six-month period. In addition, she had noticed a lump in the region of the hypothenar eminence which would fluctuate in size. The patient did not have a history of trauma or infection. Her medical history was remarkable for a 15-year history of mild hypertension which was diet controlled. Physical examination revealed a tender, hard, 2 x 3 cm mass over the hypothenar eminence, extending from the distal wrist crease to the distal palmar crease. Palpation of the mass produced paresthesias that radiated into the fingertips of the ring and small fingers. No motor deficits were observed. There was no bruit present, and a positive Allen test was noted. Radiographic studies were within normal limits.

Under general anesthesia, a longitudinal Z-shaped incision was made directly over the mass. After elevation of the flaps, a dark, purple, 2.5 x 1.3 x 1 cm multilobulated mass was found to be in close association with the ulnar nerve in the canal of Guyon, and appeared to be a thrombosed arteriovenous malformation (AVM) of the ulnar artery (Fig. 1). Careful excision of the mass was performed with preservation of the ulnar nerve. The ulnar artery was not reconstructed, as there was no evidence of ischemia upon release of the tourniquet.

Pathologic evaluation of the specimen revealed a partially thrombosed cavernous AVM. No nuclear atypia or

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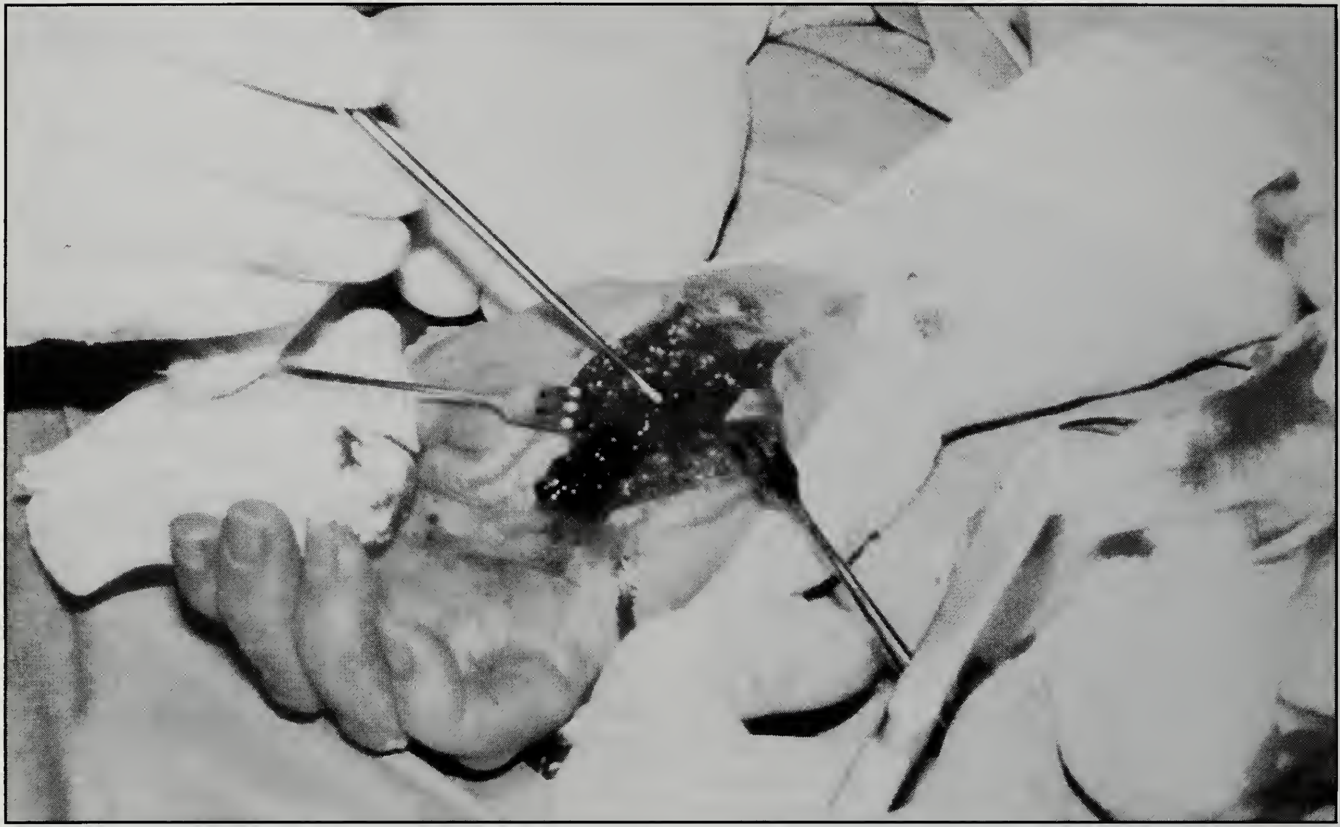

Figure 1.—Operative exposure of the mass during the first procedure in the right hand. The dark structure is the thrombosed arteriovenous malformation.

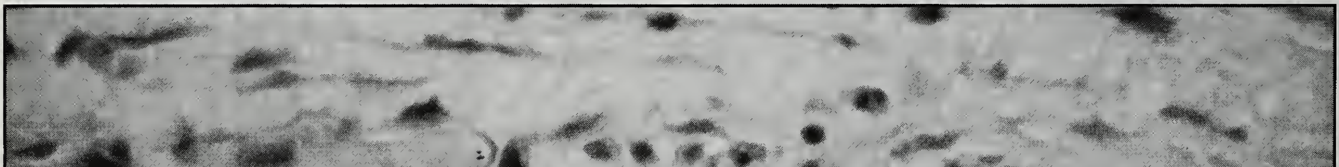

Figure 2.—This photomicrograph depicts the wall of a medium-sized artery showing the fibroelastic intimal thickening. Haematoxylin and eosin section (x400).

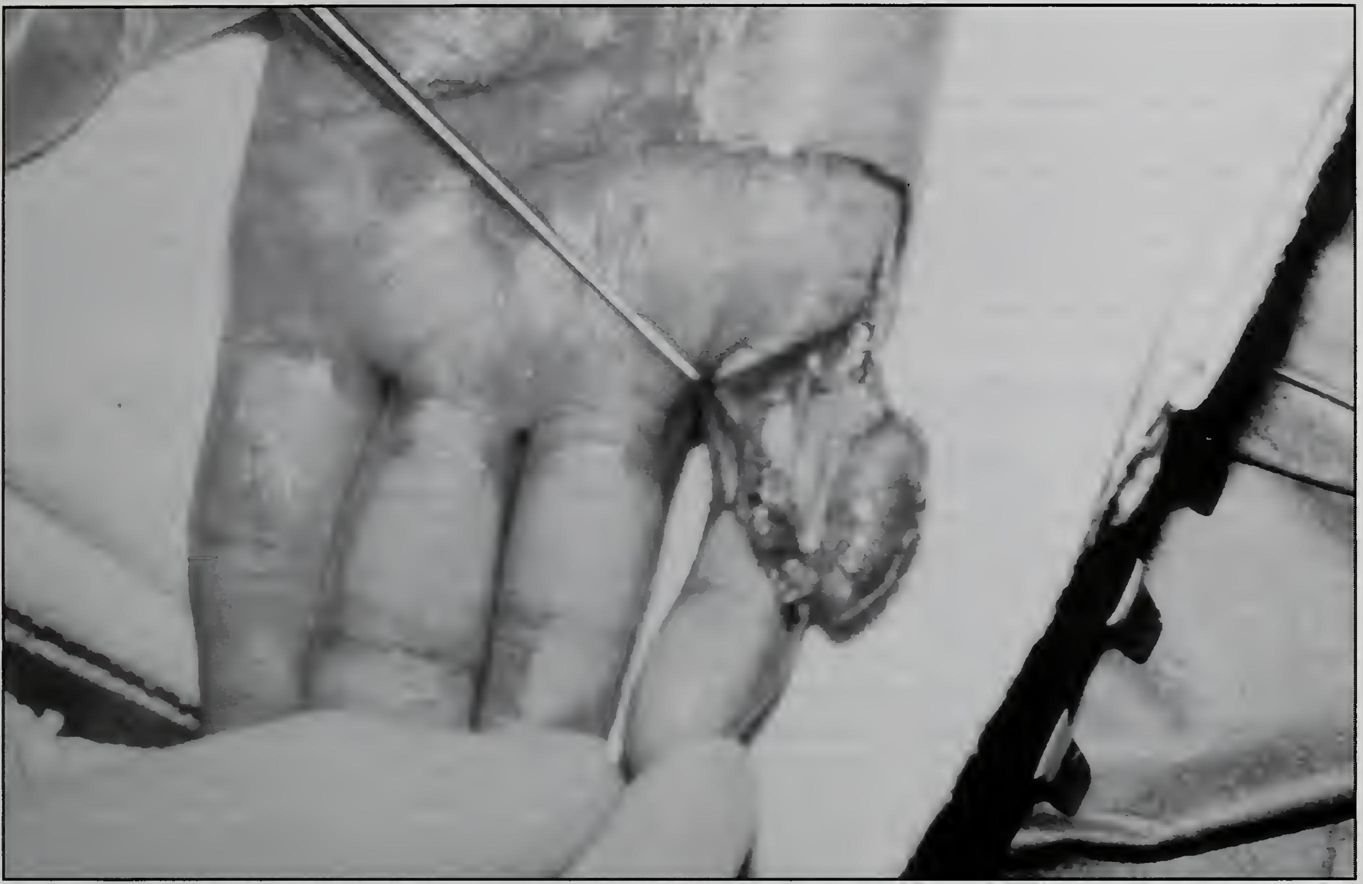

Figure 3.—Operative exposure of the well circumscribed neurilemmoma of the fifth digit during the second operation.

malignant changes were seen. Remnants of the elastic membrane were observed which showed characteristic thickening (Fig. 2).

In the early postoperative period the patient's symptoms improved significantly. However, on six-week follow-up examination, the patient presented with hyperesthesia on the ulnar aspect of the small finger. A hard, mobile, hypersensitive mass was identified on the ulnar aspect of the small finger at the level of the proximal phalanx. This was thought to be related to incomplete excision of the original lesion, and because of persisting disabling symptoms the patient was taken to the operating room for excision of the finger mass. The white colored mass, closely adherent to the ulnar digital nerve, was excised without difficulty (Fig. 3). Histopathology demonstrated a schwannoma. The patient had closure of the finger incision with good range of motion and resolution of all symptoms in the postoperative period. The patient remains asymptomatic over one year after surgery without any evidence of local recurrence of the schwanomma or the presence of another arteriovenous malformation.

Discussion

AVM's occur most commonly in the head and neck. Although up to one fifth of AVM's can affect the extremities, involvement of the hand appears to be rare.[1,4] Acquired AVM's are usually traumatic and result from a direct injury to an artery and vein that lie adjacent to each other. The presence of AVM's may also be related to other factors since a higher incidence has been observed in females, especially those undergoing hormonal treatment, such as oral contraceptive pills.[5] Embolization and/or surgical excision is curative in up to 95% of patients.[6] Diffuse AVM's may be difficult to excise completely, and demonstrate frequent recurrence. Angiographic studies or magnetic resonance imaging might be helpful prior to surgery.[6] The neurilemmoma is a relatively common benign tumor arising from the schwann cell in peripheral nerves.[7]

The interest of this case presentation lies in the simultaneous presentation of two different tumors with similar clinical symptoms of ulnar nerve compression. Any suggestion that these two tumors are etiologically related would be pure speculation since there is no literature to support this phenomenon. Our theory as to why both compressive entities presented simultaneously is that this case represents an example of the double-crush syndrome.[1] The syndrome is based on an association of proximal and distal nerve compression, but in this variation, two nonanatomic structures caused compression of the nerve within one anatomic region.[8,9] Both entities probably did not occur simultaneously, but one was not sufficient to cause symptoms. When both sites on the same nerve were compressed, the patient became symptomatic, and sought medical attention. Surgical excision of the proximal lesion initially allowed the symptoms to abate, but the symptoms recurred in the early postoperative period. In the past, the double-crush syndrome has been used to explain the failure of some patients to respond to the usually effective surgical decompression of the carpal tunnel, since a proximal site may also be involved. In this case, the failure was due to a second site of compression within the same anatomic region.

Upton and McComas hypothesized that peripheral nerve entrapment is more likely to occur in the presence of a proximal nerve lesion (termed the "double-crush syndrome").[1] They suggested that the proximal lesion was the source of decreased axoplasmic flow beyond the distal lesion allowing for axonal damage. Others have supported this theory. Rydevik and colleagues presented animal studies demonstrating that minimal compression of the rat vagus nerve did cause an acute accumulation of axonally transported material proximal to the site of constriction.[10] Trontelj and colleagues studied nerve conduction effects with two external compression sites in a single axon.[11] Massey and associates have documented, through the use of electromyogram, concurrent cervical radiculopathy and carpal tunnel syndrome.[12] Clearly, the presence of simultaneous nerve compression entities have been documented showing the significance of prompt identification. Our presentation reflects the importance of searching elsewhere along the course of the peripheral nerve when suboptimal results are present from the first decompression.

We describe a case in which two hand tumors presented similar clinical manifestations despite different histopathology. We believe that this represents an unusual example of the double-crush syndrome, in which nerve compression was caused by two nonanatomic structures within the same anatomic region. This clinical presentation is important to better understand the patient with more than one diagnosis. Careful physical examination and clinical history is the most important element in the evaluation of all patients. Presentation of tandem lesions is not always a sought out or easy diagnosis and should be considered when a patient presents with an unclear physical examination of the extremity.

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Hypopharyngeal Perforation from a Swallowed Fork: A Brief Report and Comment

ADIL M. CHOUDHARY, M.D., INGRAM ROBERTS, M.D., TARUN GUPTA, M.D.,
AND MARGARET SCHRIEBER, M.D.

Hypopharyngeal perforations are usually seen as a complication of endotracheal intubation by less experienced physicians in emergency situations. The site most commonly perforated is the pharynx, posterior to the cricopharyngeal muscle; the second most common site is the pyriform sinus. We report here an unusual cause of hypopharyngeal perforation from a swallowed plastic fork in a psychiatric patient.

Case Report

A 42-year-old woman with history of schizophrenia presented to the emergency room with complaints of decreased appetite, upper abdominal pain, and vomiting foul smelling, blood stained material. She admitted to having swallowed a plastic fork two weeks earlier. Physical examination was notable for a fever of 104° F and decreased breath sounds at right lung base. Laboratory data revealed a white blood cell count of 28,000. Chest roentgenographic showed a right sided hydropneumothorax. Computed tomography scan of the chest, in addition, revealed air in the mediastinum compatible with a perforation. Extravasation of contrast from the hypopharynx was seen on Gastrografin swallow (Fig. 1). An intraoperative gastrointestinal endoscopy delineated hypopharyngeal perforation (Fig. 2). A cervical mediastinotomy was performed. The tines of the plastic fork could be seen when trachea and esophagus were separated. The fork was removed piece by piece. The patient recovered on antibiotics.

Discussion

The hypopharynx includes the pyriform sinus, the postcricoid region, and the inferoposterior pharyngeal wall. Hypopharyngeal perforations represent a potentially life-threatening problem. They are most commonly due to traumatic attempted endotracheal intubation usually during resuscitation efforts under poor conditions or due to improper technique.[1,2] In the United States, 1,500 people die annually of ingested foreign bodies of the upper gastrointestinal tract.[3] Eighty percent to 90% of the objects will pass spontaneously, but 10% to 20% will have to be removed endoscopically; about 1% will require surgery.[3–5] Eighty percent of foreign body ingestions occur in the pediatric age group, followed by edentulous adults, prisoners, and psychiatric patients.[6] Children most often ingest coins, toys, crayons, and ballpoint caps, whereas adults commonly have problems with meat and bones.

Webb in his review of management of foreign bodies of the upper gastrointestinal tract described his experience with 242 foreign bodies of the upper gastrointestinal tract.[6] Thirty-nine were in the pharynx, 181 in the esophagus, 19 in the stomach, and three in the small bowel. Two hundred thirty-nine foreign bodies (98.8%) were managed endoscopically with success. The surgery rate was 0.4%. There was no morbidity or mortality. Sharp and pointed foreign bodies can be very difficult to manage. History of ingestion is not always available and symptoms can closely mimic other intraabdominal conditions delaying diagnosis.[6]

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Diagnosis of a hypopharyngeal perforation can be made on the basis of a Gastrografin swallow or computerized tomography.[7] Acute mediastinitis is a severe, life-threatening complication of hypopharyngeal perforation characterized by fever, chest pain, dyspnea, and variable mediastinal enlargement. Treatment includes immediate drainage, debridement, and parenteral antibiotic therapy, but the mortality still exceeds 20%.[8]

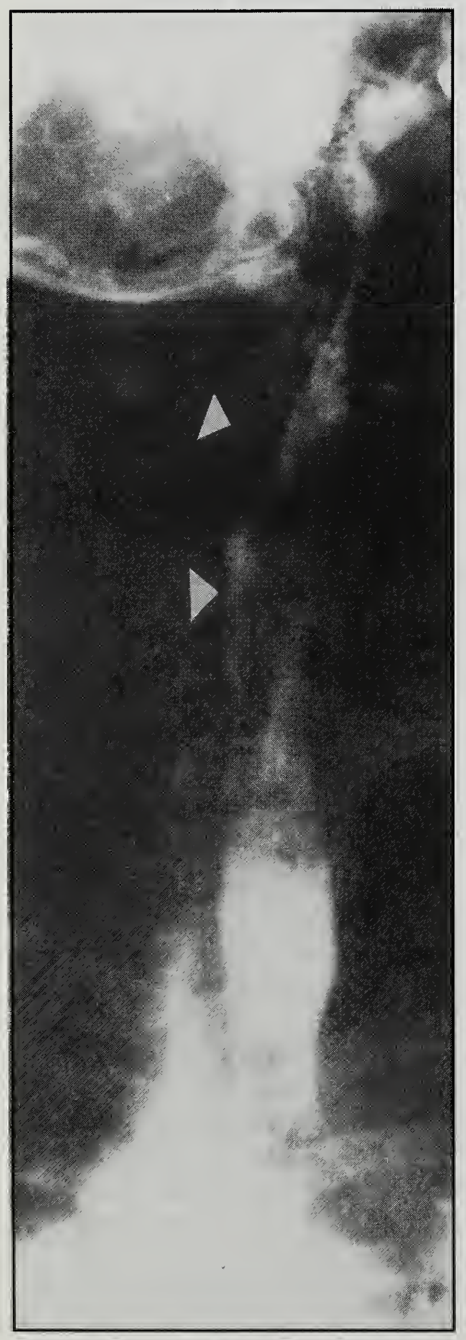

Figure 1. Gastrografin swallow showing extravasation of contrast from the hypopharynx, (arrows) tracking down para-esophageally.

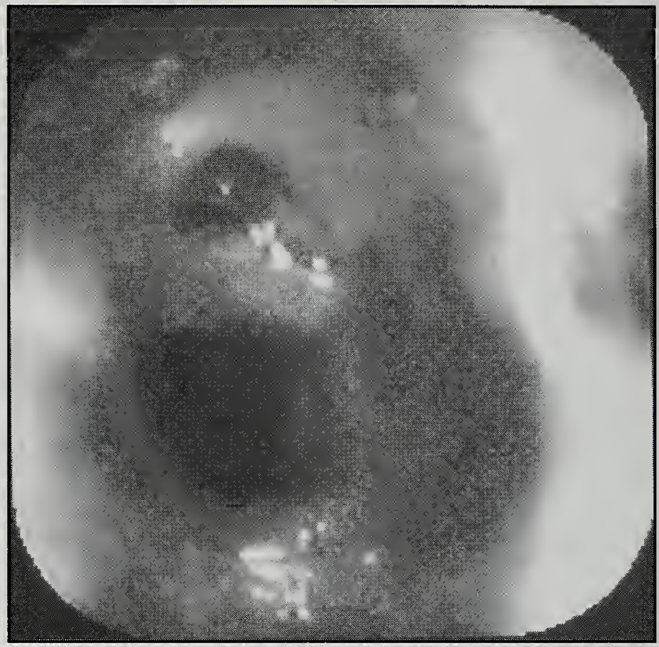

Figure 2. Upper gastrointestinal endoscopy showing the hypopharyngeal perforation (note the one large and two small holes made by the fork).

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MORBIDITY AND MORTALITY WEEKLY REPORT

Carbon Monoxide Poisoning Deaths Associated with Camping—Georgia, March 1999

CARBON monoxide (CO) is an odorless, colorless, nonirritating gas produced by the incomplete combustion of carbon-based fuels. CO exposure is responsible for more fatal unintentional poisonings in the United States than any other agent, with the highest incidence occurring during the cold-weather months.[1] Although most of these deaths occur in residences or motor vehicles,[2] two incidents among campers in Georgia illustrate the danger of CO in outdoor settings. This report describes the two incidents, which resulted in six deaths, and provides recommendations for avoiding CO poisoning in outdoor settings.

Cases 1–4.—On the afternoon of March 14, 1999, a 51-year-old man, his 10-year-old son, a 9-year-old boy, and a 7-year-old girl were found dead inside a zipped-up, 10-foot by 14-foot, two-room tent at their campsite in southeast Georgia (a pet dog also died). A propane gas stove, still burning, was found inside the tent; the stove apparently had been brought inside to provide warmth. The occupants had died during the night. Postmortem carboxyhemoglobin (COHb) levels measured 50%, 63%, 69%, and 63%, respectively, in the four decedents (in the general U.S. population, COHb concentrations average 1% in nonsmokers and 4% in smokers.[3]

Cases 5–6.—On March 27, 1999, a 34-year-old man and his 7-year-old son were found dead inside their zipped-up tent at a group camping site in central Georgia. They were discovered by other campers just before 9 A.M. A charcoal grill was found inside the tent; the grill apparently had been brought inside to provide warmth after it had been used outside for cooking. Postmortem COHb levels in the two campers measured 68% and 76%, respectively.

Reported by: R. Wheeler, Covington; M.A. Koponen, M.D., Georgia Bureau of Investigation; A.B. Johnson, M.P.H., P.J. Meehan, M.D., District 34, Newton County Health Department, Covington; S.E. LanceParker, D.V.M., K.E. Powell, M.D., Division of Public Health, Georgia Department of Human Resources. Environmental Hazards Epidemiology Section, Health Studies Branch, Surveillance and Programs Branch, Air Pollution and Respiratory Health Branch, Division of Environmental Hazards and Health Effects, National Center for Environmental Health; Division of Applied Public Health Training, Epidemiology Program Office; and EIS officers, CDC.

Editorial Note: On respiration, CO binds to hemoglobin with an affinity 200–250 times greater than that of oxygen, forming a COHb complex.[4] The principal toxic effect of CO exposure is tissue hypoxia because COHb is less efficient at transporting and delivering oxygen. Poisoning symptoms, such as headache, dizziness, and nausea, usually are seen at COHb levels of >10% in otherwise healthy persons.[2]

During 1979-1988 in the United States, from 878 to 1,513 deaths per year were attributed to unintentional CO poisoning.[1] CO poisoning has been reported in many different settings, including homes,[5] automobiles,[6] and indoor arenas.[7] The findings in this report demonstrate the danger of CO from portable gas stoves and charcoal grills, specifically if placed inside a tent or other confined sleeping area. In the United States during 1990–1994, portable fuel-burning camp stoves and lanterns were involved in 10–17 CO poisoning deaths each year, and charcoal grills were involved in 15–27 deaths each year.[2] During this same time, an annual average of 30 fatal CO poisonings occurred inside tents or campers.[2]

Evening temperatures often drop unexpectedly, even during warmer months of the year. Campers who are unprepared for colder weather may overlook the danger of operating fuel-burning camping heaters, portable gas stoves, or charcoal grills inside tents and campers. Camping stoves and heaters are not designed to be used indoors and can emit hazardous amounts of CO, and smoldering charcoal emits large amounts of CO. Inside a tent or

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camper, these sources produce dangerous concentrations of CO, which becomes even more dangerous to sleeping persons who are unable to recognize the early symptoms of CO poisoning.

To avoid hazardous CO exposures, fuel-burning equipment such as camping stoves, camping heaters, lanterns, and charcoal grills should never be used inside a tent, camper, or other enclosed shelter. Opening tent flaps, doors, or windows is insufficient to prevent build-up of CO concentrations from these devices. When using fuel-burning devices outdoors, the exhaust should not vent into enclosed shelters. Warnings about the potential for CO poisoning should be stated clearly in the owner's manual and on labels permanently affixed to portable stoves. In 1997, changes made in the labeling requirements for retail charcoal containers* more clearly conveyed the danger of burning charcoal inside homes, tents, or campers. Rather than relying on fuel-burning appliances to supply heat, campers should leave home with adequate bedding and clothing and should consume extra calories and fluids during the outing to prevent hypothermia. Continuing efforts to educate the public by organizations that promote outdoor activities or operate camping areas also should decrease camping-associated CO poisoning.

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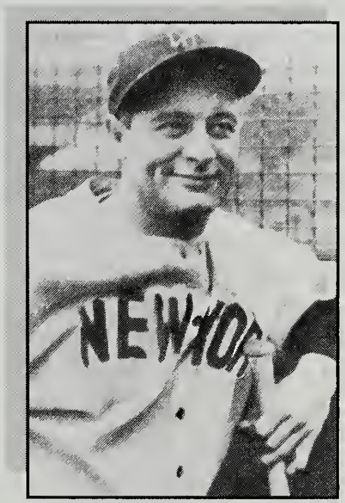
*16 CFR Part 1500.



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MORBIDITY AND MORTALITY WEEKLY REPORT

Four Pediatric Deaths from Community-Acquired Methicillin-Resistant *Staphylococcus aureus*—Minnesota and North Dakota, 1997–1999

METHICILLIN-resistant *Staphylococcus aureus* (MRSA) is an emerging community-acquired pathogen among patients without established risk factors for MRSA infection (eg, recent hospitalization, recent surgery, residence in a long-term-care facility [LTCF], or injecting-drug use [IDU]).[1] Since 1996, the Minnesota Department of Health (MDH) and the Indian Health Service (IHS) have investigated cases of community-acquired MRSA infection in patients without established risk factors. This report describes four fatal cases among children with community-acquired MRSA; the MRSA strains isolated from these patients appear to be different from typical nosocomial MRSA strains in antimicrobial susceptibility patterns and pulsed-field gel electrophoresis (PFGE) characteristics.

Case Reports

Case 1.—In July 1997, a seven-year-old black girl from urban Minnesota was admitted to a tertiary-care hospital with a temperature of 103 F (39.5°C) and right groin pain. An infected right hip joint was diagnosed; she underwent surgical drainage and was treated with cefazolin. On the third day of her hospital stay, antimicrobial therapy was changed to vancomycin when cultures of blood and joint fluid grew MRSA. The same day, the patient had another hip drainage procedure, but had respiratory failure and was placed on mechanical ventilation. Her course was complicated by acute respiratory distress syndrome, pneumonia, and an empyema that required chest tube drainage. She died from a pulmonary hemorrhage after five weeks of hospitalization.

MRSA isolated from her blood, hip joint, and sputum was susceptible to multiple antibiotic classes (Table 1). An autopsy revealed bilateral bronchopneumonia with abscesses. The patient was previously healthy with no recent hospitalizations. No family members resided in LTCFs or worked in health-care settings.

Case 2.—In January 1998, a 16-month-old American Indian girl from rural North Dakota was taken to a local hospital in shock and with a temperature of 105.2°F (40.6° C), seizures, a diffuse petechial rash, and irritability. She was treated with ceftriaxone but developed respiratory failure and cardiac arrest and died within two hours of arriving at the hospital. Blood and cerebrospinal fluid cultures drawn immediately postmortem grew MRSA that was susceptible to multiple antibiotic classes (Table 1). An autopsy revealed multiple small abscesses of the brain, heart, liver, and kidneys; autopsy cultures of meninges, blood, and lung tissue grew MRSA. One month earlier, the patient had been treated with amoxicillin for otitis media. Neither the patient nor family members had been hospitalized during the previous year; no family members resided in LTCFs or worked in health-care settings.

Case 3.—In January 1999, a 13-year-old white girl from rural Minnesota was brought to a local hospital with fever, hemoptysis, and respiratory distress. The day before admission she had a productive cough and a 2-cm papule on her lower lip. A chest radiograph revealed a left lower lobe infiltrate and a pleural effusion. She was treated with ceftriaxone and nafcillin. Within five hours of arriving at the hospital, she became hypotensive and was transferred to a pediatric hospital, intubated, and treated with vancomycin and cefotaxime. Despite pulmonary and hemodynamic support, the patient's respiratory status deteriorated, and she died on the seventh hospital day from progressive cerebral edema and multiorgan failure.

The patient's blood, sputum, and pleural fluid grew MRSA that was multidrug susceptible (Table 1). An autopsy revealed consolidated hemorrhagic necrosis of the left lung. The patient had no chronic medical conditions and no recent hospitalizations; no family members were health-care workers or employees of an LTCF or had a history of IDU.

Reprinted from the *Morbidity and Mortality Weekly Report*, 20 August 1999; vol. 48, no. 32, Centers for Disease Control (CDC), National Institute for Health (NIH).

Table 1.—Cases of community-acquired methicillin-resistant *Staphylococcus aureus,* by selected characteristics—Minnesota and North Dakota, 1997–1999

Characteristic	Case 1	Case 2	Case 3	Case 4
Age	7 years	16 months	13 years	12 months
Syndrome	septic arthritis, sepsis, pneumonia/ empyema	severe sepsis	necrotizing pneumonia, severe sepsis	necrotizing pneumonia, severe sepsis
Antimicrobial susceptibility*	t/s, tet, cip, gent, ery, clind, vanc	t/s, tet, cip, gent, ery, clind, vanc	t/s, cep, cip, gent, ery, clind, vanc	t/s, tet, cip, gent, ery, clind, vanc
Toxin tests†	SEC positive	SEC positive	SEB positive	SEB positive

*t/s=trimethoprim-sulfamethoxazole, tet=tetracycline, cip=ciproflaxacin, gent=gentamicin, ery=ervthromicin, clind=clindamycin, and vanc=vancomycin.

†SEB=staphylococcal enterotoxin B; SEC=staphylococcal enterotoxin C.

Case 4.—In February 1999, a 12-month-old white boy from rural North Dakota was admitted to a tertiary-care hospital with bronchiolitis, vomiting, and dehydration. He had a temperature of 105.2°F (40.6°C) and a petechial rash. Chest radiograph revealed an infiltrate in the right lung consistent with pneumonitis. On the second hospital day, the patient was diagnosed with a large right pleural effusion. He was transferred to the intensive-care unit, a chest tube was inserted, and treatment with vancomycin and cefuroxime was initiated. The patient developed severe respiratory distress and hypotension the following day and died.

The patient's admission blood culture was negative, but his pleural fluid and a postmortem blood culture grew multidrug-susceptible MRSA (Table 1). An autopsy revealed acute necrotizing pneumonia with extensive hemorrhage and numerous gram-positive cocci in the right lung. The patient had not been hospitalized since birth and had no known medical problems; no family members were health-care workers or employees of an LTCF or known to be IDUs. His two-year-old sister had been treated for a culture-confirmed MRSA buttock infection three weeks earlier. MRSA isolates from the sister and the patient had identical antibiotic susceptibility profiles.

Laboratory Summary

MRSA isolates from these four cases were susceptible to all antimicrobial agents tested except beta-lactams (Table 1). All vancomycin minimum inhibitory concentrations were ≤ 2 μg/L. Isolates from all four cases had the *mecA* gene by PCR assay at MDH. Isolates from cases 1 and 4 shared an indistinguishable PFGE pattern; isolates from cases 2 and 3 differed by two and three bands, respectively, suggesting clonal relatedness among these cases.[2] In comparison, these PFGE patterns differed by an average of >10 bands compared with PFGE patterns among nosocomial MRSA isolates from several Minnesota hospitals. *Sma* I was the restriction enzyme used for PFGE. No isolate produced toxic shock syndrome toxin-1.

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Editorial Note: Since the first case reports of MRSA infections in the United States in 1968,[3] MRSA has become an increasing problem. The percentage of nosocomial *S. aureus* isolates that were methicillin resistant increased from 2% in 1974 to approximately 50% in 1997.[4,5] Methicillin resistance is usually conferred by the chromosomal *mec*A gene, which encodes an altered penicillin-binding protein (PBP-2A) that causes resistance to all beta-lactam antibiotics, including cephalosporins. However, many nosocomial MRSA strains have acquired resistance to numerous other antibiotic classes through a variety of mechanisms. Approximately 50% of MRSA isolates identified at National Nosocomial Infection Surveillance (NNIS) system hospitals are susceptible only to vancomycin.[5]

Most documented MRSA infections are acquired nosocomially; previously, community-acquired cases were restricted to patients residing in LTCFs and among IDUs.[6] However, both of these groups have extensive exposure to hospitals, and their infections are generally caused by nosocomial MRSA strains. More recently, however, community-acquired MRSA infections have been identified at a Chicago pediatric hospital, in day care centers, and among minority communities in other countries.[1,7–9] Unlike nosocomial MRSA isolates, community-acquired isolates from patients without known MRSA risk factors are generally multidrug susceptible (except to betalactams) and have distinctive molecular characteristics, as did the four isolates from the fatal cases presented in this report.

These four cases demonstrate the potential severity of community-acquired MRSA infections. Beta-lactam antibiotics (including cephalosporins) are used as empiric therapy for various adult and pediatric infections, but these agents are uniformly ineffective in treating MRSA infections. All patients in this report were initially treated with a cephalosporin antibiotic; the delayed use of antibiotics to which MRSA were susceptible may have contributed to the fatal outcomes. As a result, where such infections exist, obtaining appropriate cultures of infected sites is important. Clinicians should consider MRSA as a potential pathogen in severe pediatric pneumonia or sepsis syndromes in areas where community MRSA infections have been reported. In critically ill patients with invasive infections, empiric treatment with vancomycin (in addition to a third-generation cephalosporin) pending culture results may be necessary to treat cephalosporin-resistant *S. pneumoniae*[10] or MRSA.

The rural/urban and racial diversity among these cases suggest that MRSA colonization may be widespread, especially in this region of the United States. The extent of community-acquired MRSA infection in the United States is unknown. Few data are available to define the molecular characteristics of these strains. It is also unclear how to limit the spread of MRSA within the community and whether it is feasible to decolonize selected high-risk persons. The role that increased antibiotic use in children—particularly beta-lactams and cephalosporins—has played in selecting for MRSA strains in the community also is unknown. Local or state-based surveillance is needed to characterize and monitor community-acquired MRSA infections and to develop strategies that will improve MRSA treatment and control.

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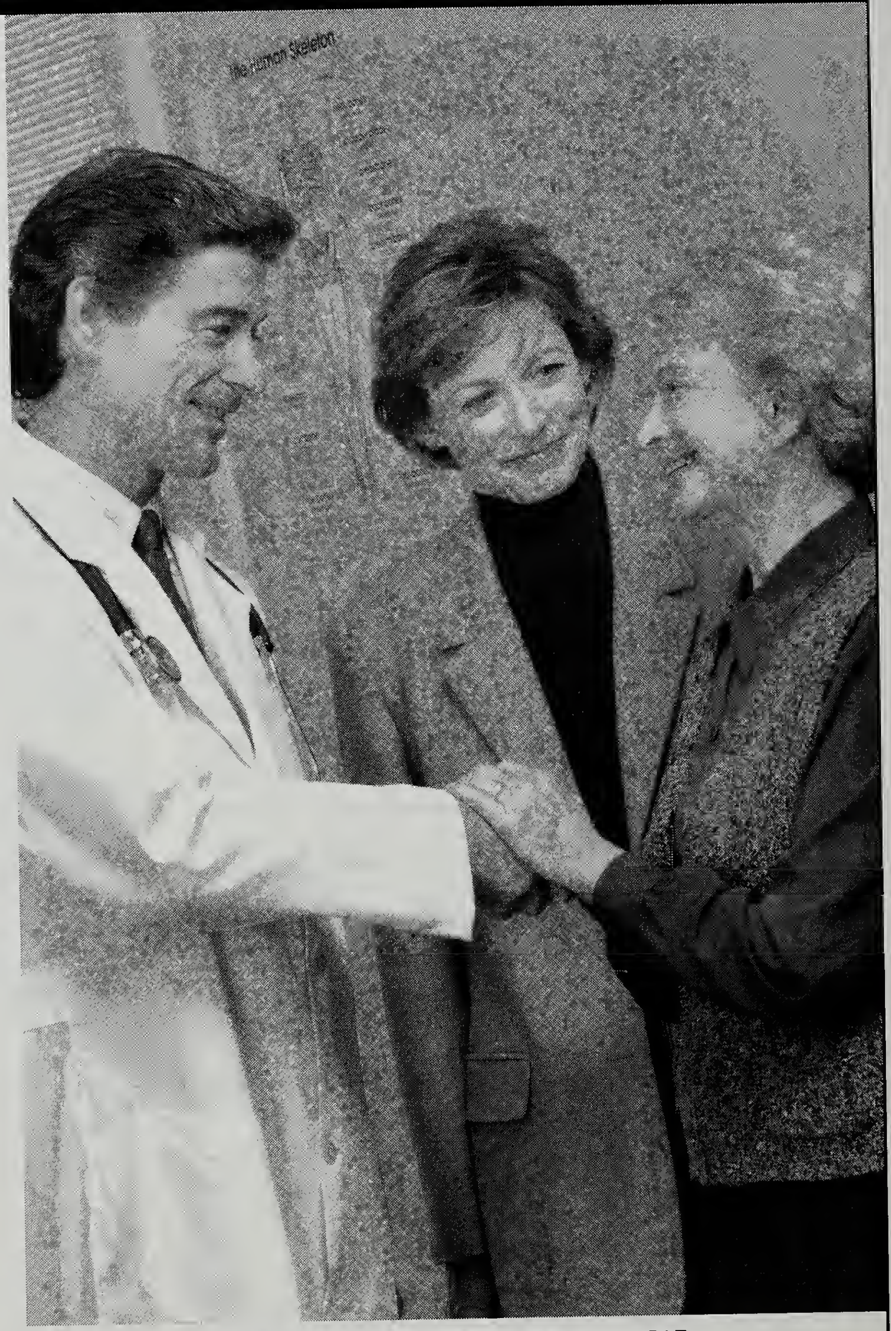

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Commentary

Listening Outside the Box: The Case of Lyme Disease and Other Tick-Borne Diseases

In this age of the consumer health care revolution, the time has come for physicians to listen outside "the box"—the boundaries of conventional medicine and the attitudes of the medical establishment—to see what consumers have on their minds and how they view the medical profession.

In the *New York Times*, May 4, 1999, David France wrote, "Lyme Expert Developed Big Picture of Tiny Tick," a profile of Doctor Allan C. Steere, who named Lyme disease after he discovered the relationships between arthritis in children and tick bites in Lyme, Connecticut in 1975, says:

> In the early 90s, Dr. Steere, began to hypothesize that many people complaining of Lyme disease symptoms did not, in fact, have the disease. Writing in the *Journal of the American Medical Association* in 1993, Dr. Steere said the disease was overdiagnosed and overtreated—a statement that [set] sufferers, scientists and clinicians into squabbling factions. In one group is the American Lyme Disease Foundation, mostly representing researchers, including Dr. Steere [and] in the other is the Lyme Disease Foundation, mostly representing clinicians and patients. Their chief discord is over the possibility that Lyme disease, in some patients, develops into a chronic disease which may require massive doses of antibiotics over long periods of time, as some doctors believe.

In the case of Lyme Disease, some victims who passionately believe they suffer from chronic Lyme Disease, and they say physicians are complacent, ignorant, and arrogant about a disease that effects an ever-widening circle of Americans.[1–3] Meanwhile, many of those in the medical establishment, such as Doctor Allen C. Steere of the Tufts School of Medicine, who named the original disease after Lyme, Connecticut, when he discovered that 39 children with arthritis there had been bitten by ticks, and who has done much of the work on the current Lyme vaccine, maintains that chronic symptoms are an immune system reaction which he dubs the "post-Lyme syndrome" and which he says has nothing to do with recurrent infection.[4] Because of Doctor Steere's influence, many insurance companies have refused to pay for long term antibiotic therapy.

The Center for Communicable Disease says that 128,327 cases of Lyme Disease have been reported since 1982 and that this number only represents about one-third of the actual cases.[4] Ask any of your circle of Connecticut patients or acquaintances if they know of any one who has come down with Lyme Disease and I will guarantee that two-thirds will say: "Of course." Or "Yes." Or "Who doesn't know of someone with Lyme disease?" Many of them are asking: "Why doesn't the medical profession do something about this terrible disease that is devastating and incapacitating so many?"

Lyme Disease strikes fear among growing numbers of Americans, particularly those who live in the Northeast or the Upper Midwest. Partly, this fear is because the number of cases may be 12 times as high as actually reported and because so many cases remain undiagnosed for so long. Despite increased consumer awareness, a survey of physicians revealed these figures:[5]

- 72% of physicians said that less than 25% of patients were left undiagnosed for more than 12 months.
- 20% reported that 26% to 50% of their patients were left undiagnosed for more than 12 months.
- 8% of physicians said that more 50% of their patients had gone undiagnosed for more than 12 months.

As part of my personal effort to contribute to the community and as a member of the Old Saybrook Rotary Club, I have been participating in a Rotary initiative to find the right tactics to prevent Lyme disease.[6] Rotary's motivations are educational—not political or medical. In July, eight Rotarians from the Connecticut Rotary district met with a half-dozen Lyme disease advocates. The latter included six representatives from the Lyme Disease Foundation, located in Hartford. These representatives and the Attorney General of Connecticut, Richard Blumenthal, were instrumental in passing legislation requiring the mandatory payment by insurance companies for 30 to 60 days, of treatment of Lyme disease, diagnosed by physicians. The Connecticut State Medical Society supported the bill that eventually passed in June 1999.

As our two hour meeting wound down, we decided that the best course of action would be for 3,000 Rotarians in 64 clubs in Connecticut to serve the public as a grassroots network for distributing educational material on Lyme disease. Rotary is now actively studying this possibility as a public service for communities throughout Connecticut. I believe physicians can best position themselves for the future by serving as educational partners, information sharers, and advocates for their patients. (Call me if you would like informational material to distribute to your patients.) One piece I found helpful was a wallet-sized card summarizing tick-borne disorders: how to identify ticks, what they look like, how to prevent tick infection, how to remove ticks, and what the various tick-borne diseases are.

What disturbs me is that many partisan chronic disease advocates say that physicians have blinders on about Lyme disease. Some even believe there is a conspiracy among doctors to deny that chronic Lyme disease even exists. The most militant of these "chronic" Lyme disease advocates speak of "Lyme-illiterate" doctors.

To test your Lyme disease literacy, here's a True-False Lyme Disease IQ test developed by the Lyme Disease Foundation:

1.—Lyme disease was first discovered in Lyme, Connecticut.

False.—Lyme disease was first described in 1883 by a German physician and has been talked about in the European literature ever since. Dr. Rudolph Scrimenti of Wisconsin described the first U.S. case in 1970. Later in 1975, Dr. Alan Steere, then at Yale and now at Tufts, named the disease based on his findings of the relationship of arthritis in 39 children with tick bites.

2. All ticks transmit Lyme disease.

False.

Only two species transmit Lyme disease—the western black legged tick (*ixodes pacificus*) and the black-legged tick (*ixodes scapular*). These ticks are often carried on deer.

3. All Lyme disease patients have a bull's eye rash.

False.

About 60% of patients develop such a rash.

4. Only patients who test positive have Lyme disease.

False.

All tests have false-negatives and false-positives. There's no test that can detect when all of the Lyme bacteria are dead. You cannot absolutely rule out or rule in Lyme disease with blood tests.

5. Lyme disease can only be contracted in the summertime.

False.

November through June is a peak tick season in the West and in the South. In the Northeast, it is April through October. During milder winter weather, ticks are actively biting people and causing disease.

6. Once you have Lyme disease, you can be reinfected at anytime.

True.

You do not develop an immunity to Lyme disease therefore can be reinfected at anytime. You can have multiple episodes of Lyme disease.

7. Lyme disease is easily diagnosed and treated.

False.

Lyme disease is a multisystem disease and is a great masquerader of other diseases. Its symptoms can be vague and it can mimic chronic fatigue syndrome, fibromyalgia, and multiple sclerosis or any other multisystem disease. "Chronic disease believers" say that most chronic and undiagnosed cases may respond to antibiotics.

8. You should remove ticks by using fine-pointed tweezers.

True.

9. Lyme disease occurs in every state.

True.

All 50 states have reported Lyme disease cases, although the concentration of cases is greatest in the Northeast and upper Midwest.

10. There are vaccines for Lyme disease.

True.

There's now a vaccine for healthy people 15 to 70 years of age produced by SmithKline Beecham. It was introduced in January, 1999,[7] and although it proved 80% effective in trials with 11,000 patients, its merits are unknown in large scale vaccinations. Old Lyme residents remain skeptical of the vaccine's value.[8]

A Disease of the Northeastern Suburbs

Although Lyme disease has been reported in all 50 states, it is heavily concentrated in the Northeast. This is primarily because of suburban development. As the suburbs creep ever deeper into the woods, the population of deer ticks and their access to humans has increased each year for the last two decades. Since 1994, nearly 50,000 inhabitants of New Jersey, New York, and Connecticut have been reported to have Lyme disease.[9] As of late June, some 300,000 doses of the Lymerix vaccine had been administered. This is not enough to stem the expansion of affected cases.

Summary

To sum up, get out of the box and look at Lyme disease from the point of view of those who believe they suffer from chronic Lyme disease. Meanwhile, spread the word about how to prevent the disease and pass out information about the facts of the disease.

Richard L. Reece, M.D.
Old Saybrook

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From *The Connecticut State Medical Journal*

September 1949

Analysis of Cancer of the Breast at the Waterbury Hospital, 1931–1948

PHILIP GEDEON, M.D., *Waterbury*

The Author. *Resident in Surgery, Waterbury Hospital*

CANCER of the breast has been and still is a problem to the medical profession. Since Halstead originally described his radical mastectomy, treatment of cancer of the breast has not varied to any great extent. In spite of this fact, statistical study of large groups is warranted to clarify our concept of the disease so as to effect a higher percentage of cure.

This study has been made to evaluate the results of the different treatments of cancer of the breast at the Waterbury Hospital. Our results probably would not differ to a great degree from those of other investigators throughout the country.

As the treatment of cancer of the breast is turning more and more towards radical surgery rather than any other form, complete analysis of such treated cases in this series has been done.

THE METHOD OF ANALYSIS

In studying this series I have followed the excellent skeleton used by Drs. Haagensen and Stout, in their report of Results of Treatment of Carcinoma of the Breast, at Presbyterian Hospital in New York.[1]

Between 1931–1948, 337 cases of cancer of the breast were treated or examined at the Waterbury Hospital. 240 cases out of the 337 were treated or examined between 1931—January 1944. Only these cases were analyzed in detail as they have passed the 5 year period following their treatment. All these cases were females.

Of the 240 cases 23 were secondary ones, i.e., previously treated elsewhere. This leaves 217 cases as primary ones which were analyzed thoroughly.

TABLE 1

I. *Disposition of cases* Total 240	
1. Secondary cases No. 23	
1. No further Rx by surgery or radiation	7 or 30.4%
2. Radiation alone	9 or 39.1%
3. Radical mastectomy and postoperative radiation	1 or 4.3%
4. Limited surgery alone	2 or 8.6%
5. Limited surgery plus postoperative radiation	4 or 17.2%
II. *Primary Cases* 217	
1. No further Rx by surgery or radiation	6 or 2.7%
2. Radiation alone	
3. Surgery alone	
A. Radical mastectomy	68 or 31.3%
B. Simple mastectomy and axilla	5 or 2.3%
C. Simple mastectomy	13 or 5.9%
4. Surgery combined with radiation	
A. Radical mastectomy and radiation	65 or 29.9%
B. Simple mastectomy and axilla and radiation	6 or 2.7%
C. Simple mastectomy and radiation	12 or 5.4%
5. Surgery combined with radiation and radiation sterilization	
A. Radical mastectomy and radiation and radiation sterilization	19 or 8.7%
B. Simple mastectomy and radiation and radiation sterilization	1 or 0.4%
6. Radiation and radiation sterilization alone	2 or 0.8%

As noted above 2.7 per cent of the primary cases were first seen with the disease so far advanced that no treatment was attempted. 9.2 per cent of the primary cases were treated only by radiation for palliation because they showed also widespread metastasis. Radical mastectomy (which in this series means removal of the breast and both pectoralis major and minor muscles and dissection of the axilla) without any preoperative or postoperative radiation was done in 31.3 per cent of the primary cases. This forms the majority of cases treated by one single form of treatment. When considering all the radical mastectomies done with

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or without radiation or sterilization it is found that 70 per cent of the primary cases were thus treated. In this series there were 37 cases treated by simple mastectomy with or without radiation giving a 17 per cent of the whole primary group. Of these, 18 cases were in the 7th or 8th decade of their life and were considered poor surgical risks. Seven were done just for palliation in cases having ulceration of the breast skin with remote metastasis. Eleven other cases had simple amputation due to faulty preoperative diagnosis which later proved to be malignant though of low grade—the majority being intracystic papillary carcinoma Grade 1 and mucous carcinoma Grade 1, a few fibrocarcinoma Grade 1. In one case the biopsy submitted did not represent the true lesion and examination of the breast postoperatively revealed intracystic papillary carcinoma, Grade 1.

Operability: The operability rate refers to the proportion of cases in which radical mastectomy was performed. This is divided into relative and absolute operability.

Relative operability: i.e., number of cases in which radical operation was done divided by the number of primary cases or 152/217 or 70 per cent.

Absolute operability: i.e., number of cases in which radical operation was done divided by total number of cases of all types or 153/240 or 63.7 per cent. Our figures come very close to those of Haagensen and Stout being 73.1 per cent for relative and 61.5 per cent for absolute operability.

Follow-Up: Our cases are followed up through our tumor clinic which meets three times a month. The ward cases are called upon by appointment and are seen in the clinic as frequently as needed for the remainder of their lives. The private cases are usually followed up by their physicians who report to the tumor clinic. Even some of the private cases are referred to the clinic for follow-up if they should not be at any time under the care of any physician. Only one out of 240 cases has been lost track of before 5 years giving a follow up percentage of 99.5 per cent.

TABLE 2

5 year results in primary cases according to treatment

1. No further Rx by surgery or radiation	6
All died of cancer of the breast before 5 years	
2. Radiation alone	20
A. Died of other causes before 5 years	3 or 15%
B. Died of cancer of the breast before 5 years	16 or 94.1%
C. Survived 5 years with metastases	1 or 5.9%
3. Radical mastectomy alone	68
A. Died of other causes before 5 years	4 or 5.8%
B. Died of cancer of breast	15 or 23.8%
C. Lost track of before 5 years	1 or 1.4%
D. Survived 5 years with metastasis	9 or 14.2%
E. Living 5 years without metastasis	38 or 60.3%
F. Postoperative death	1 or 1.4%
4. Simple mastectomy and axilla	5
A. Died of cancer of breast before 5 years	2 or 40%
B. Survived 5 years with metastasis	1 or 20%
C. Living 5 years without metastasis	2 or 40%
5. Simple mastectomy alone	13
A. Died of other causes before 5 years	1 or 7.6%
B. Died of cancer of the breast	3 or 25%
C. Living 5 years without metastasis	9 or 75%
6. Radical mastectomy and radiation (preop. or postop.)	65
A. Died of other causes before 5 years	3 or 4.6%
B. Lost track of	0
C. Died of cancer of the breast	37 or 59.6%
D. Survived 5 years with metastasis	4 or 6.4%
E. Living 5 years without metastasis	21 or 33.8%
7. Simple mastectomy and axilla and radiation	6
A. Died of cancer of the breast before 5 years	4 or 66.6%
B. Survived 5 years with metastasis	1 or 16.6%
C. Living 5 years without metastasis	1 or 16.6%
8. Simple mastectomy and radiation	12
A. Died of cancer of breast before 5 years	7 or 63.6%
B. Died of other disease	1 or 8.3%
C. Living 5 years without metastasis	4 or 36.3%
9. Radical mastectomy and radiation plus radiation sterilization	19
A. Died of cancer before 5 years	9 or 47.3%
B. Survived 5 years with metastasis	2 or 10.5%
C. Living 5 years without metastasis	8 or 42.2%
10. Simple mastectomy and radiation plus radiation sterilization	1
A. Died of cancer of the breast before 5 years	1 or 100%
11. Radiation and radiation sterilization alone	2
A. Died of cancer before 5 years	2 or 100%

From the above table it is seen that our highest 5 year clinical cure rate was among the group treated with radical mastectomy alone giving 60.3 per cent who are living more than five years without evidence of recurrence or metastasis and 14.2 per cent who survived five years with recurrence or metastasis. The group treated by radical mastectomy combined with preoperative or postoperative prophylactic radiation or radiation sterilization did not give as good a result as that treated by radical mastectomy alone. The group treated by simple mastectomy with or without radiation is so small that it would not be significant statistically. Although the results in this series have been exceptionally good, simple mastectomy, is definitely not advised as the treatment of choice for cancer of the breast.

"Five year clinical cure" designates the group of patients that are living more than five years or died after that from another cause without evidence of local recurrence or metastasis. Patients that developed a local recurrence within five years and were secondarily treated and subsequently followed for a period of at least five years without evidence of recurrence or metastasis are also included in this "5 year clinical cure group."

"Five year survival rate" designates the group of patients that lived five years or more with or without recurrence or metastasis.

Table 3

Relative 5 year clinical cure rate is No. of 5 year clinical cures divided by No. of radical mastectomies.

Absolute 5 year clinical cure rate is No. of 5 year clinical cures divided by total number of patients seen.

Relative 5 year survival rate is No. of 5 year survival divided by number of radical mastectomies.

Absolute 5 year survival rate is number of 5 year survival divided by total number of patients seen.

Relative 5 year clinical cure rate for all radical mastectomies with or without radiation or sterilization 67/144 or 46.5 per cent.

Relative 5 year clinical cure rate for all simple mastectomies with or without axillary dissection or radiation or sterilization 16/36 or 44.4 per cent.

Absolute 5 year clinical cure rate for same groups—radical mastectomies 67/240 or 27.9 per cent.

Simple mastectomies 16/240 or 6.6 per cent.

Relative 5 year survival rate for all radical mastectomies with or without radiation or sterilization 82/144 or 56.8 per cent.

Relative 5 year survival rate for all simple mastectomies with or without radiation or sterilization 18/36 or 50 per cent.

Absolute 5 year survival rate for all radical mastectomies with or without radiation or sterilization 82/240 or 34.1 per cent.

Absolute 5 year survival rate for all simple mastectomies with or without radiation or sterilization 18/240 or 7.5 per cent.

Our results differ somewhat from those of Haagensen and Stout, the latter being 36.1 per cent for relative 5 year clinical cure rate and 22.2 per cent for absolute clinical cure rate 41.3 per cent for relative 5 year survival rate and 25.3 per cent for absolute survival rate.

In this series 14.5 per cent of all the radical mastectomies developed a local recurrence in operative field or chest wall or homolateral axilla, and 34 per cent developed distal metastasis within five years.

All tabulations from here on dealing with radical mastectomies include all the radical mastectomies with or without radiation or sterilization.

In the 217 primary cases, 152 radical mastectomies were done, however one was lost track of and seven died from other causes before five years, leaving a total of 144 radical mastectomies on which the analysis has been based.

Table 4
Frequency and Distribution of Local Recurrences and Metastasis Within 5 Years Following Treatment

		LOST TRACK OF OR DIED OF OTHER CAUSES	IN OP. FIELD AND CHEST WALL		HOMOLATERAL AXILLA		DISTAL		PRESENT ALL TIME	
	NO.	BEFORE 5 YEARS	NO.	%	NO.	%	NO.	%	NO.	%
Radiation alone	20	3	1	5.8	0		2	11.0	14	82.3
Radical mastectomy alone	68	6	4	6.4	4	6.4	12	19.2	3	4.8
Simple mastectomy and axilla	5	0	0		1	20	1	20	1	20
Simple mastectomy alone	13	1	0		1	8.3	1	8.3	2	16.6
Radical mastectomy and radiation	65	3	6	9.6	6	9.6	28	45.1	6	9.6
Simple mastectomy and axilla and radiation	6	0	0		2	33.3	4	66.6	1	16.6
Simple mastectomy and radiation	12	1	1	9	0		6	54.5	1	9
Radical mastectomy and radiation and red. ster.	19	0	4	21	0		9	47.2	1	5.2
Simple mastectomy and radiation and sterilization	1	0	0		0		0		1	100
Radiation and radiation sterilization	2	0	0		0		0		2	100

Table 5
Results of Radical Mastectomies in Primary Cases According to Length of Operation

LENGTH OF OP.	NO. OF	OP. DEATH		5 YEAR LOCAL RECURRENCE		5 YEAR CLINICAL CURE	
IN MINUTES	CASES	NO.	%	NO.	%	NO.	%
1. 1–59	3	0		0		1	33.3
2. 60–119	103	1	0.9	17	16.6	52	50.9
3. 120–179	23	0		4	17.3	8	34.6
4. 180–239	4	0		0		1	25
5. Not mentioned	11	0		0		5	45.4

Table 6
Results of Radical Mastectomies in Primary Cases According to 5 Year Periods

FIVE YEAR PERIOD	NO OF OP.	OP. DEATH	5 YEAR LOCAL REC. NO.	%	5 YEAR CLINICAL CURE NO.	%
1931–1935	36	0	8	22.2	10	27.7
1936–1940	67	1	6	8.9	27	40.3
1941–1943	41	0	7	17	30	73.1

The number of cases in group 1 is so small that the results are not statistically significant. It is really very hard to conceive of a thorough radical mastectomy done in less than 60 minutes. The best results were found in group 2 and this actually constituted the greatest single group in this series. The 5 year clinical cure rate was progressively lower in groups 3 and 4, but here also the number of cases was so small that the results could not be statistically significant. However analysis of the cases treated since January 1944, which shall be discussed later, shows a definite trend towards a more time consuming operation with so far a better result.

The number of cases that had had radical mastectomy in each 5 year period did not differ greatly from the others yet the corresponding five year clinical cure rate showed a definite rise. This was due to a more thorough and more time consuming surgery and partly due to the selection of cases.

BIOPSY

In our series only five cases had a biopsy done sometime before radical mastectomy was undertaken. The time lapsing between the biopsy and the radical mastectomy was as follows: 2 days, 15 days, 2 months, 6 months and 8 months. Three of these showed no local recurrence within five years and had 5 year clinical cure. The one taken 15 days prior to radical mastectomy died within one year of widespread metastasis. The one taken six months prior to radical mastectomy lived four years and six months died of metastasis without evidence of local recurrence. The rest of our cases had the biopsy done at time of operation and few of them had no biopsy done. We can conclude that the biopsies in our series did no harm.

TABLE 7
RESULTS OF RADICAL MASTECTOMIES IN PRIMARY CASES
WARD VS. PRIVATE CASES

	NO. OF OP.	OP. DEATH NO.	OP. DEATH %	5 YEAR LOCAL RECURRENCE NO.	5 YEAR LOCAL RECURRENCE %	5 YEAR CLINICAL CURE NO.	5 YEAR CLINICAL CURE %
Ward	19	0		5	26.3	6	31.5
Private	125	1	0.8	16	12.8	61	48.8

Only 44 ward cases were in this series and out of those only 19 had radical mastectomy. This is a small number to compare with the much larger one of the private cases. Still it is shown that the results were appreciably better in the private cases group. Usually our ward cases were much more advanced in the disease when first seen than the private cases.

TABLE 8
DURATION OF THE DISEASE ON ADMISSION IN PRIMARY CASES
WARD VS. PRIVATE CASES

	NO. OF OP.	DURATION STATED	LESS THAN 1 MO. NO.	LESS THAN 1 MO. %	1–5 MOS. NO.	1–5 MOS. %	6 MOS. + NO.	6 MOS. + %
Private	125	122	34	27.8	38	31.1	50	41.1
Ward	19	19	1	5.2	11	57.8	7	37

The majority of the ward cases were conscious of the breast mass from one to six months before seeking treatment. Only 5.2 per cent of the ward cases compared to 27.8 per cent of the private cases came to treatment with the duration of the disease less than one month. This may explain the higher 5 year clinical cure rate among the private cases.

TABLE 9
FREQUENCY OF AXILLARY METASTASES IN PRIMARY CASES
WARD VS. PRIVATE

		MICROSCOPIC REPORT			
		LIMITED TO BREAST		AXILLARY METASTASIS	
	NO. OF OP.	NO.	%	NO.	%
Private	125	60	48	65	52
Ward	19	9	47.3	10	52.7

There was practically no difference between the percentage of axillary metastasis as identified microscopically between the ward and private cases.

This certainly bears the general opinion that the earlier the disease is detected the better the chance for a cure. Although the 5 year local recurrence rate was highest in the first group yet the 5 year clinical cure rate was also highest in the same group.

TABLE 10
RESULTS OF RADICAL MASTECTOMY IN PRIMARY CASES
ACCORDING TO DURATION OF DISEASE ON ADMISSION

DURATION	NO. OF CASES	5 YEAR LOCAL RECURRENCE NO.	5 YEAR LOCAL RECURRENCE %	5 YEAR CLINICAL CURE NO.	5 YEAR CLINICAL CURE %
1–30 days	36	6	16.6	21	58.3
1–6 months	49	7	14.2	23	46.9
6–12 months	22	3	13.6	11	50
1 year +	34	4	11.7	12	35.2
Unstated	3	1	33 3	0	

TABLE 11
RELATIONSHIP OF DURATION OF DISEASE ON ADMISSION IN
PRIMARY CASES TO PRESENCE OF AXILLARY METASTASIS
MICROSCOPIC

DURATION	NO. OF CASES	LIMITED TO BREAST NO.	LIMITED TO BREAST %	AXILLARY METASTASIS NO.	AXILLARY METASTASIS %
1–30 days	36	20	55.5	16	44.5
1–6 months	49	21	42.8	28	57.2
6–12 months	22	12	54.5	10	45.5
1 year +	34	15	44.1	19	55.9
Unstated	3	1	33.3	2	66.6

It is found here that although some patients do come for treatment very soon after discovering their disease, yet quite a high percentage of them have axillary metastasis thus giving a poorer prognosis. This might be due largely to an actual much longer duration of the disease certainly without the patient's knowledge or possibly to a higher grade malignancy with early metastasis which is true in some cases.

Table 12
Results of Radical Mastectomy in Primary cases According to Axillary Involvement (Microscopic)

EXTENT OF DISEASE	NO OF OP.	5 YEAR LOCAL RECURRENCE NO.	%	5 YEAR CLINICAL CURE NO.	%
Limited to breast	69	8	11.5	53	76.8
Axilla involved	75	13	17.3	14	18.6

There is no doubt that involvement of the axilla gives a bad prognosis. In this series the 5 year clinical cure rate was 4 times higher in the cases where the disease was limited to the breast. Even the 5 year local recurrence rate was higher in the group having axillary involvement.

The youngest patients seen were two females at the age of 29 years. Both were treated by radical mastectomy and radiation sterilization. One had metastasis to the axillary glands on admission and died three years later from metastasis. The second case had no axillary involvement and is still living 11 years after treatment without evidence of recurrence. This series is statistically insignificant, being too small. Our best result was in Group 5, although there was not much difference in the 5 year clinical cure rate. As to Group 7, one patient 80 years old died two years following the operation from cancer. while the other patient had her radical mastectomy at the age of 84 and lived for 11 years more and died of other causes without evidence of recurrence.

Table 13
Age Factor and Results of Radical Mastectomies With or Without Radiation

AGE	NO. OF CASES	5 YEAR LOCAL RECURRENCE NO.	%	5 YEAR CLINICAL CURE NO.	%
1. 20–29	2	0		1	50
2. 30–39	17	5	29.4	7	41.1
3. 40–49	38	4	10.5	17	44.7
4. 50–59	32	3	9.3	15	46.8
5. 60–69	48	8	16.6	24	50
6. 70–79	5	1	20	2	40
7. 80 +	2	0		1	50

Table 14
Site of Cancer in the Breast and the Results of Radical Mastectomies in Primary Cases

SITE IN BREAST	NO. OF CASES	5 YEAR LOCAL RECURRENCE NO.	%	5 YEAR CLINICAL CURE NO.	%
Upper Outer Quadrant	60	10	16.6	36	58.3
Upper Inner Quadrant	29	2	6.8	13	44.8
Lower Outer Quadrant	23	2	8.6	11	47.8
Lower Inner Quadrant	4	0		2	50
Under Nipple	14	4	28.5	3	21.4
Unstated	14	3	21.4	3	21.4

The upper outer quadrant has been the site of the tumor much more than any other part of the breast, yet the 5 year clinical cure rate has been the highest in the same group. This is possibly, as Haagensen and Stout put it, due to the ability of the surgeon to remove the tumor with a wider margin of uninvolved surrounding tissues when it is situated in the upper outer quadrant than in any other part of the breast.

Table 15
Size of Breast Tumor and Results of Radical Mastectomies in Primary Cases

SIZE	NO. OF OP.	5 YEAR LOCAL RECURRENCE NO.	%	5 YEAR CLINICAL CURE NO.	%
Below 3 cm.	29	3	10.3	15	51.5
3–5.9 cm.	84	14	16.6	42	50
6 + cm.	20	4	20	7	35
Unstated	11	0	0	3	27.2

This definitely shows that the larger the tumor the more apt it is to recur and the lesser the chance for a 5 year clinical cure.

Table 17
Relationship of Size of Tumor to Axillary Mastectomies in Primary Cases That Had Radical Mastectomy

SIZE OF TUMOR	NO. OF OP.	AXILLARY METASTASIS NO.	%
Under 20 mm.	8	3	37.5
20–49 mm.	78	35	44.8
50 +	47	30	63.8
Unstated	11	7	63.6

There is definite correlation between the size of the tumor and the presence or absence of axillary metastasis. The percentage of cases that have axillary involvement is unfortunately high even when the tumor measures less than 20 mm.

Table 16
Relationship of Size of Tumor to its Duration

SIZE OF TUMOR	NO. OF OP.	DURATION UNDER 1 MONTH		1–5 MONTHS		6–11 MONTHS		1 YEAR		UNSTATED	
Under 20 mm.	8	2	25%	3	37.5%	0		3	37.5%	0	
20–49 mm.	78	20	25.6%	29	37%	10	12.8%	17	21.7%	2	2.6%
50 +	47	12	25.5%	13	27.6%	10	21.2%	11	23.4%	1	2.1%
Unstated	11	1	9%	5	45.4%	1	9%	4	36.3%	0	

As noted in the above table there was no definitecorrelation between the size of the tumor to its duration in this series.

Table 18
Results of Radical Mastectomies in Primary Cases With Multiple Tumors in One Breast

PHYSICAL FINDINGS	NO. OF CASES	5 YEAR LOCAL RECURRENCE NO.	%	5 YEAR CLINICAL CURE NO.	%
Multiple tumors only	3	1	33.3	2	66.6
Multiple tumors with signs of advanced disease	1	0	0	0	0

This series is too small to be considered but at least it shows that the presence of multiple tumors in one breast without signs of advanced disease does not necessarily make the prognosis any worse.

Table 19
Influence of Preoperative Radiation on the Results of Radical Mastectomies in Primary Cases

AGE	NO. OF CASES	5 YEAR LOCAL RECURRENCE NO.	%	5 YEAR CLINICAL CURE NO.	%
No preop. radiation	132	20	15.1	64	48.4
Preop. radiation	12	1	8.3	3	25

The group that received preoperative radiation was quite small. Most of these cases had ulceration of the breast skin and were more advanced locally than those who did not get preoperative radiation. The 5 year clinical cure rate was only half as high as in the group that was not radiated. Although statistically this group was small and insignificant yet, it seems that the consensus of opinion is not to give preoperative radiation to operable cases as only one case was given preoperative radiation in the group treated since January 1944 to date.

Table 20
Influence of Postoperative Prophylactic Radiation on the Results of Radical Mastectomies in Primary Cases

AGE	NO. OF CASES	5 YEAR LOCAL RECURRENCE NO.	%	5 YEAR CLINICAL CURE NO.	%
No postop. radiation	74	7	9.4	42	56.7
Postop. radiation	70	14	20	25	35.7

Table 21
Influence of Postoperative Prophylactic Radiation on the Results of Radical Mastectomy in Primary Cases of Comparison Between Cases Admitted With and Those Without Axillary Metastasis

TREATMENT	AXILLARY METASTASIS NO.	%	5 YEAR LOCAL RECURRENCE NO.	%	5 YEAR CLINICAL CURE NO.	%
No. postop. prophylactic red.	27	36	3	11.1	5	18.5
Postop. prophylactic red.	48	64	10	0.8	9	18.7

The question of the extent of disease in those receiving postoperative prophylactic radiation always arises. It is true in this series that those who received such treatment were considered clinically more advanced in the disease than the others, however radiation postoperatively did not seem to influence the course of the disease to any appreciable extent.

Although only 36 per cent of the cases that had axillary involvement did not receive any postoperative prophylactic radiation, yet the 5 year clinical cure rate was the same in both groups. This show that at least in this group there was no benefit from postoperative prophylactic radiation.

Table 22
Influence of Postoperative Prophylactic Radiation on the Results of Radical Mastectomies in Primary Cases

TREATMENT	NO. OF CASES	5 YEAR LOCAL RECURRENCE NO.	%	5 YEAR CLINICAL CURE NO.	%
1. Radiation sterilization alone	2	0		0	
2. Simple mastectomy and sterilization	1	0		0	
3. Radical mastectomy and sterilization	19	4	21	8	42

This is an extremely small series that actually has no statistical significance. The first two groups were actually too far advanced to warrant any radical surgery and the treatment was given for palliation with no result. The third group was sterilized as well as surgerized. They were among the younger patients. The course of the disease did not seem to be effected to a great degree by sterilization.

GENERAL CONSIDERATION OF RADIATION AND STERILIZATION THERAPY

Drs. Ira Kaplan and Rieva Rosh[2] of New York City, after 20 years experience in the radiation treatment for cancer of the breast at the Bellevue Hospital reported that the best results in treatment of cancer of the breast in the cases considered operable were obtained in those that received preoperative radiation only three weeks prior to surgery then operated upon, followed by postoperative radiation. They presented 82 cases treated in this fashion with 31 cases still alive from five to 14 years. They go to the extent of advising immediate post operative radiation or very shortly after surgery This was also advocated by Gratzek, Stenstrom and Petit. Peters was of the opinion that preoperative radiation was of definite value. Gylstorff-Petersen were of the opinion that preoperative radiation was even more valuable than postoperative radiation Nohrman of Sweden advocates the combined treatment.

The preoperative radiation was given for 10 consecutive days to the breast, anterior chest wall, axillary, supraclavicular, and posterior axillary areas.

In their experience the effect of irradiation on lymphnode metastasis had not been satisfactory, however, they got good results in the supraclavicular metastasis with the 5 gm radium pack.

They advocate the castration of all young women with breast cancer and all females with breast cancer and bone metastasis who have not reached the menopause.

Hormone therapy proved of little value in the control of breast cancer or its metastasis in their hands.

In our series, though the number of cases that received radiation therapy or were castrated was small, yet the results as to 5 year clinical cure were appreciably lower than those that were not radiated. Hormone therapy has not been used in this series to a sufficient extent to warrant any comment.

These cases were usually so far advanced in the disease that the secondary treatment was mostly palliative except in a few cases. As noticed, most of the cases were treated with radiation alone or in combination with some sort of surgery. Radiation therapy still stands as the best palliative procedure in such cases.

ANALYSIS OF CASES TREATED SINCE JANUARY 1944 TO DATE

This series was analyzed to compare some findings with the previous ones even though a 5 year period has not elapsed.

Ninety-seven patients were treated or examined at the Waterbury Hospital since January 1944 to date. Of these 2 were males giving a 2.05 per cent of this series. Ninety-four cases were primary and 90 of these were private cases.

Relative operability 77/94 or 81.9 per cent.

Absolute operability 77/97 or 79.3 per cent.

It is clearly seen that more than 50 per cent of the cases have been treated by radical mastectomy only. Radiation has been much less frequently used in combination with radical mastectomy than in the previous series. The relative operability was 81.9 per cent and the absolute operability was 79.3 per cent compared to 70 per cent and 63.7 per cent, respectively, in the previous series.

There is a tendency towards more lengthy operation and so far the results have been better.

TABLE 23
ANALYSIS OF THE SECONDARY CASES SEEN BETWEEN 1931–1943 INCLUSIVE

				LONGEVITY FOLLOWING PRIMARY VS.						SECONDARY TREATMENT LONGEVITY FOLLOWING				
SECONDARY RX.	NO.	5 YEAR LOCAL RECURRENCE		LESS THAN 5 YEARS		5 YEAR SURVIVAL RATE		5 YEAR CLIN. CURE		LESS THAN 5 YEARS		5 YEAR SURVIVAL	5 YEAR CL. CURE	
No treatment	7	0		2	28.5%	2	28.5%	3	42.8%	0		0	0	
Radiation alone	9	3	33.3%	8	88.8%	1	11.2%	0		9	100%	0	0	
Radical mastectomy and postoperative radiation	1	1	100%	1	100%	0		0		1	100%	0	0	
Limited local surgery alone	2	1	50%	1	1	50%	0		2	100%	0	0		
Limited local surgery and radiation	4	1	25%	2	50%	2	50%	0		3	75%	0	1	25%

Table 24
Analysis of the Primary Cases—Disposition of Cases

TREATMENT	NO.	AXILLARY INVOLVEMENT		5 YEAR LOCAL RECURRENCE		DIED OF DISEASE		DIED OF OF OTHER CAUSES		LIVING WITH METASTASIS		LIVING WITHOUT METASTASIS	
Rad. alone	5	5	100%	0		4	80%	0		1	20%	0	
Rad. mast alone	52	18	34.6%	4	76%	4	7.6%	1	11.9%	3	5.8%	44	86.3%
Rad. mast. radiation sterilization	4	4	100%	0		1	25%	0		0		3	75%
Rad. mast. and radiation	20	11	55%	1	5%	4	20%	0		1	5%	15	75%
Simple mast. alone	6	1	16.6%	1	16.6%	2	33.2%	0		1	16.6%	3	50%
Simple mast. and radiation	2	0		0		1	50%	0		0		1	50%
Simple mast. and axilla	3	1	33.3%	0		1	33.3%	0		0		2	66.6%
No rx.	2	2		0		2	100%	0		0		0	

Table 25
Results of Radical Mastectomy in Primary Cases According to Length of Operation

LENGTH OF OP. IN MINUTES	NO.	5 YEAR LOCAL REC.		LIVING WITH REC.		LIVING WITHOUT		DIED OF DISEASE		DIED OTHER CAUSES	
1–59	2	0		0		0		2	100%	0	
60–119	42	5	11.9%	4	95%	33	78.5%	5	11.9%	0	
120–179	22	0		0		19	86.3%	2	9%	1	4.5%
180–239	3	0		0		3	100%	0		0	
Unstated	7	0		2	28.5%	5	71.5%	0		0	

Table 26
Relationship of Duration of Disease on Admission in Primary Cases to Presence of Axillary Metastasis (Microscopic)

		LIMITED TO BREAST		AXILLARY METASTASIS	
DURATION	NO. OF CASES	NO.	%	NO.	%
1–30 days	24	16	66.6	8	33.4
1–6 months	28	22	78.5	6	21.5
6–12 months	11	3	27.2	8	72.8
1 year +	11	2	18.1	9	81.9
Unstated	2	0		2	100

This table definitely shows the longer the duration of the disease, the higher the incidence of axillary metastasis. Here also we find a high percentage of axillary involvement even among the very early cases.

Table 27
Size of Breast Tumor and Results of Radical Mastectomies in Primary Cases

SIZE	NO. OF OP.	5 YEAR LOCAL REC.		LIVING WITH REC.		LIVING WITHOUT REC.	
Below 3 cm.	14	0	0%	1	7.1%	13	92.9%
3–5.9 cm.	42	1	2.3%	1	2.3%	35	83.3%
6 + cm	9	2	22.2%	2	22.2%	5	55.5%
Unstated	11	2	18.1%	0		9	81.9%

This substantiates the findings in the previous series.

Table 28
Relationship Between Size of Tumor to its Duration in Primary Cases of Radical Mastectomy

SIZE		DURATION									
OF TUMOR	NO. OF OP.	UNDER 1 MONTH		1–5 MONTHS		6–11 MONTHS		1 YEAR +		UNSTATED	
1. Under 20 mm.	14	6	42.8%	4	28.5%	1	7.1%	2	14.2%	1	7 1%
2. 20–49 mm.	42	11	26.1%	20	47.6%	5	11.9%	5	11.9%	1	2.3%
3. 50 + mm,	9	2	22.2%	2	22.2%	3	33.3%	2	22.2%	0	0
4. Unstated	11	3	27.2%	3	27.2%	2	18.1%	2	18.1%	1	9.09%

There is some correlation in this table between the size of the tumor and its duration. The majority of the cases in Group 1 were seen in a period less than one month, while in Group 2 within 1–5 months and in Group 3, 6–11 months.

Two males were seen in this series with cancer of the breast. They were both treated in 1946. One had a radical mastectomy, the second had a simple mastectomy plus postoperative radiation. Both of them are still living without any evidence of recurrence or metastasis.

TABLE 29
RELATIONSHIP BETWEEN SIZE OF TUMOR TO AXILLARY METASTASIS IN PRIMARY CASES THAT HAD RADICAL MASTECTOMIES

SIZE OF TUMOR	NO OF OP.	AXILLARY METASTASIS	
Under 20 mm.	14	2	14.2%
20-49 mm.	42	17	40.4%
50 + mm.	9	8	88.8%
Unstated	11	6	54.5%

Here again it is found that the larger the tumor the higher the incidence of axillary involvement.

SUMMARY

1. 337 cases of breast cancer were treated or examined at the Waterbury Hospital between 1931–1948.
2. 152 radical mastectomies were performed between 1931–1943 and 76 have been done since 1944.
3. Complete analysis of the group treated between 1931–1943 has been made with disease limited to the breast than in those with metastasis to the axillary lymph nodes.
4. Five year clinical cure rate was four times higher in the cases with the disease limited to the breast than in those with metastasis to the axillary lymph nodes.
5. A correlation between the size of the tumor, its duration and axillary node involvement was demonstrated.
6. Radiation whether preoperative or postoperative was of no great value in this series. Palliative radiation is of definite value.
7. The treatment in the last five years has shown a trend toward more radical surgery alone without radiation.
8. The surgeons in the last five years have been spending more time on the operation and doing more thorough dissection.

ADDENDUM

Upon reviewing the slide with Dr. Joseph O. Collins, head of the pathology department at the Waterbury Hospital, it was found that among the 16 five year clinical cures following simple mastectomy with or without radiation 6 cases have had intracystic papillary adenocarcinoma, Grade 1, 1 case fibrocarcinoma, Grade 1, 2 cases scirrhous adenocarcinoma, Grade 1, 2 cases mucous carcinoma, Grade 1, 1 case of carcinoma simplex, Grade 1,1 case of benign intraductal papilloma. This leaves 15 cases with 5 year clinical cure rate of 15/36 or 41.6 per cent and an absolute 5 year clinical cure rate of 15/240 or 6.2 per cent.

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2. Ira Kaplan, M.D., and Rieva Rosh, M.D.: Cancer of the Breast, Radiology, Vol. 47, 583-591, December 1946.

FIVE WAYS TO DIE ON THE GOLF COURSE:

1. Hit by a golf ball.
2. Run over by a golf cart.
3. Whacked by a golf club.
4. Struck by lightning.
5. Forgot your hat.

Surprisingly, one million new cases of skin cancer are detected every year. One person an hour in the U.S. dies from melanoma, the deadliest form of skin cancer. If you spend a lot of time in the sun, you should protect yourself. One out of five Americans develops skin cancer during their lifetime. Don't be one of them. Stay out of the midday sun. Cover up. Wear a hat. Seek shade. And use sunscreen. For more information on how to protect yourself from skin cancer, call 1-888-462-DERM or visit www.aad.org.

AMERICAN ACADEMY OF DERMATOLOGY

Breast Cancer—Real Progress

In keeping with established practice, each month the editor selects a paper from a 50-year-old issue of *Connecticut Medicine* for republication. One of two responses usually follows the selection: "The more things change, the more they remain the same," or, "Hard to believe this was medicine just 50 years ago." Examples of subjects bringing out the former are commentaries on government and business intrusions into the practice of medicine, financing of health care, and assaults on the physician-patient relationship. Eliciting the latter response, articles on infectious disease, surgical technique, and diagnostic studies are typical. This month's selection entitled "Analysis of Cancer of the Breast at Waterbury Hospital—1931–1948" is another case in point. The paper gave a profile of breast cancer as discovered and treated in a typical Connecticut community 50 years ago. Its contrast with current practice is a striking reminder of true medical progress.

The Waterbury experience was published more than 50 years after the disfiguring radical mastectomy had become the standard operation for cure of cancer of the breast. It was appropriate for the author to state, "Since Halstead (sic) originally described his radical mastectomy, treatment of cancer of the breast has not varied to any great extent." It was only a decade after the Waterbury paper that the beginnings of significant change in breast cancer treatment appeared. Even as some were advocating extension of the radical mastectomy to encompass a wider field, George Crile, Jr., Patey and McWhirter, suggested that cures could be achieved with lesser surgery and particularly with the addition of radiation therapy. In 1958 the National Surgical Adjuvant Breast Project (NSABP), under the direction of Dr. Bernard Fisher, enrolled its first patient in a clinical trial to determine the value of adjuvant chemotherapy. The 40-year span since those pioneering efforts has seen a monumental transformation in breast cancer care contrasting with that in Waterbury Hospital, indeed, in most U.S. hospitals, in 1948.

The case load alone is striking when one compares 337 cases over an 18 year period with that number of new breast cancers now seen annually in Connecticut's larger hospitals. While debate continues about the basis for the increased incidence of the disease, much of the rise is attributed to earlier discovery. Enhanced public awareness among women, monthly breast self-examination (BSE) with greater willingness to seek examination, timely access to clinical attention, reduced fear of ugly deformity as breast conserving surgery has become the standard of care, and above all, the mammogram account for earlier diagnosis.

In the premammogram days in Waterbury, 75% of women with breast cancer presented more than one month after self-discovery of a lesion; more than half of them were aware of the "abnormality" for six months or longer. Forty-four percent of those beyond 30 days had axillary lymph node metastases and a subsequent five year fatality rate that was four times that in patients without node involvement. Eighty percent had a lesion 3 cm or greater in diameter. Of the 52 Waterbury patients who were treated by radical mastectomy alone, the local recurrence rate was 7.6% and their five year disease-free survival was 86.3%.

While these latter figures are not widely divergent from the results achieved today for palpable cancers, presenting features of breast cancer in the current era are vastly different from a half century ago. It is uncommon for breast surgeons in most community practices to see lesions larger than 2–3 cm. Nonpalpable lesions are the rule and in-situ carcinoma, mostly DCIS, unknown in 1948, has increased from 5% to nearly 20% of the total of breast malignancies in just the past decade. Early discovery by mammography has changed the breast cancer landscape. Yet, even with organized programs, no more than 50% of at risk women have screening mammograms. This must be expanded. With smaller and smaller lesions, it is unlikely that BSE will gain a great deal more in discovery. More can be gained, however, with wider application of aspiration biopsy for even the minimal abnormality especially in high-risk women, and with guided core biopsy.

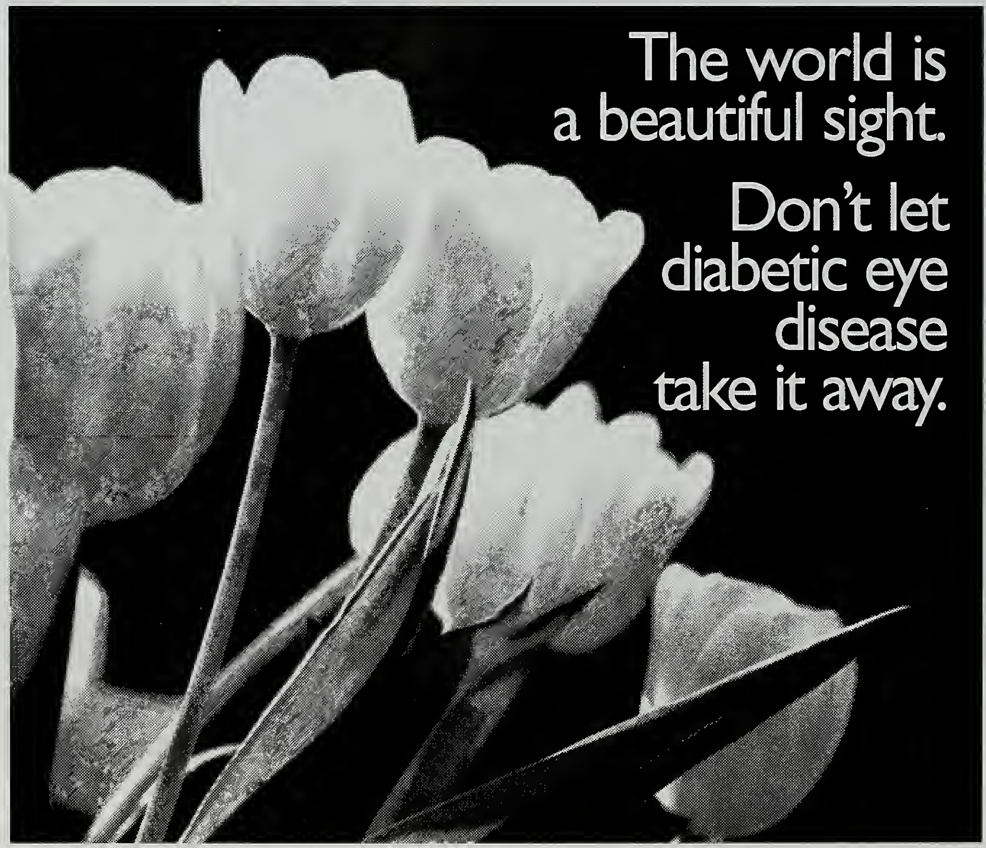
Therapy often is in sharp contrast to status 1948. The classic radical mastectomy is gone, replaced first by the modified radical, which itself is decreasing use as breast conserving procedures are combined with radiation therapy. The NSABP has brought improvements in survival with appropriately directed adjuvant chemotherapy, benefiting even node negative patients with all but the very smallest tumors (less than 1 cm). Earlier discovery, more effective treatment, with multiple options for the patient and a mortality rate falling at a rate of 1% to 2% annually—this is the status of breast cancer care at the millenium.

(continued on next page)

Hopes for prevention were raised with the promising findings of the role of Tamoxifen demonstrated in the P-1 trial. The diet issue is not settled but the contrast between the U.S. and Japan is provocative, if not proven science. The U.S. breast cancer death rate, where fat accounts for upwards of 40% of calorie intake, is three times the rate in Japan, where dietary fat content is half that of the U.S.

There is better, wider and earlier discovery, surgery tailored to need, with a role for the patient in decision-making, effective adjuvant radiation and chemotherapy, a falling mortality rate and meaningful advances in prevention. Much accomplished in 50 years. With the month of October, Breast Cancer Awareness Month, close upon us, there is more to be done.

H. David Crombie, M.D.
Editor



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NATIONAL INSTITUTES OF HEALTH

THE PRESIDENT'S PAGE—PERSONAL INSIGHTS

"Ask a Silly Question ..."

"Ask a silly question and you'll get a silly answer." That was my mother's way of telling me that success in discussion and debate usually belongs to the person who can frame the question(s) around which discussion centers.

Policy makers, at least the successful ones, have known this for a long time. And many CSMS members have made a very disturbing observation that flows from this concept directly into the political process. For many years now, the policies and bills that we are asked to comment upon by our legislative friends often start from premises and assumptions that are professionally unacceptable. They are premises that harbor significant risk of harm for our patients, and assumptions that often involve a significant curtailment of patient and physician freedom and autonomy.

We usually recognize this conundrum almost immediately, and in an effort to educate and enlighten our legislative friends, we pepper them with questions:

- questions dealing with a patient's right to choose any desired physician, be it primary care or specialist;
- questions about a patient's right to access any qualified provider and not just those on restrictive lists;
- questions about a patient's privacy rights;
- questions about the patient's right to sue medically meddlesome HMO's that do harm when they (illegally) engage in the corporate practice of medicine;
- questions about the availability of MSA's, and other matters so vital to the well-being of our patients.

We've asked these, and other questions, over and over, with no apparent benefit for either our patients or ourselves. Good questions, yet they yield no apparent improvement in the patient's lot. Why? Because they're the wrong questions! And because of that, we've lost control of a debate that should be professional and inspiring, not legislative and politically partisan. That's our problem.

How did such a situation come about? It's because we've let elected officials pass bad laws—laws that have confiscated our natural rights. We've let politicians, often with –°agendas, alienate the very rights referred to in the Declaration of Independence as being "self-evident" and "unalienable!" And now, like innocent children, we go back to those same politicians, hat in hand, and beg them to dispense some of those unalienable rights back to us.

Think about it. Twenty years ago, patients with a bellyache picked themselves up and visited the doctor. Any doctor they wanted. If they had experienced similar symptoms before, they would go directly to the same specialist who had previously helped them. Their doctor would order whatever tests seemed to be in order. If consultation was needed, it was readily obtained. If the problem required surgery and the patient agreed to it after full discussion, the patient would ask, "Whom do you recommend as my surgeon?" and "How soon can I get it done?"

Yes, there were bills to be paid. Bills that the patient was personally responsible for. But the vast majority of people in Connecticut carried real medical insurance. Insurance that cost a relatively modest amount because it only covered unexpected, generally large expenses such as hospitalization. That's what rational, traditional insurance is supposed to do. Routine medical expenses were accepted as a part of living. They were not covered by insurance because such coverage is economically unreasonable, and a fundamentally unsound idea.

Nowadays, it's different. Not better, mind you, just different. Thanks to the Health Manpower Act, the HMO Act, ERISA, cleverly designed tax law glitches, and a spate of federal and state laws and mandates, the employer usually "gives" the employee "free health care coverage." Oh yes, the boss does spend the employee's money to purchase it, but the employee thinks it's free. The sick patient then calls whatever doctor is on "the list," not necessarily the doctor of choice. If the doctor thinks tests are needed, they must be limited to simple ones. Complicated tests require permission

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from a clerk at the managed care company. A specialist? That requires a special, written request from the doctor. If the consultation is granted, the patient is sent to whatever specialist the company has cut a deal with. Surgery? Now you're talking real prior approval! If granted, it will be with whatever surgeon, and in whatever hospital, the health plan has made deals with! Never mind consideration of such passé ideas as, "who's the best for this job?"

Of course, the CEO of a major corporation who gets taken to the "wrong" hospital for an acute coronary occlusion will still have his hospitalization paid for by the insurer out of a "special fund" set aside just for such a purpose. After all, he's special. And the CEO will never stop to think that the ordinary employee of his company, who winds up in the same predicament, will be stuck with big, unpaid bills because of the "special deal" that the CEO's minions cut with a managed care company.

Similarly, prominent legislators who discover that their favorite specialist isn't on "the list" when needed during a hospitalization will probably also discover that their primary care physician is only too happy to make "special arrangements" for the legislator's personal choice to see the patient anyway. That is unfortunate. After all, the lawmaker might be induced by such an experience to support legislation to get rid of the outrageous restrictions under which patients have been forced (by prior legislative acts of course) to seek care today.

Don't you see? When we ask legislators a question such as, "Will you support a patient's bill of rights?" we ask the "silly question." What's worse, we're also asking the wrong question! We should be asking, "Why have you supported legislation that has progressively and relentlessly allowed patient rights to be taken away from all but the elite?" And, "Will you support the repeal of those bad laws, including some health care legislation of the last 30 years, that have confiscated our natural and unalienable rights as citizens?"

Those are the "right" questions. We had better start asking them. Soon. And let us resolve not to ask any more "silly questions." Even at the risk of being politically incorrect. Because more than our patient's health is at risk. Our way of life is up for grabs.

> "Members of Congress...have not yet seemed to grasp the remarkable connection between their good intentions and poor policy outcomes."
>
> —Robert Moffit, Ph.D.

Stephen R. Katz, M.D.,
President

REFLECTIONS ON MEDICINE

Health-Care Policy: *Quo Vadis*?

ROBERT U. MASSEY, M.D.

> I *have* all the money I want. My wife gives me ten dollars a month and with that I pay my carfare, buy my lunches, and get my hair cut. Walter B. Cannon

MY memory of medical economics at midcentury is that it was pretty simple stuff. Those who had the means paid for their visits to the physician, often on the spot. From those who were short of cash, little or nothing was expected. The first group comprised about two thirds of an internist's practice. They provided enough money for carfare, lunches, haircuts, and all the other necessities of life. Some of us even had two cars. There were Christmas gifts, too; one patient, a fellow physician, had a television set delivered to my doorstep—up to that point, 1960, I had refused to allow one in the house. His note read: "This is not for you, you bastard, but for your family."

Like all of history, a generation or two ago is a different country: it was understood a third of a century ago that doctors and hospitals would care for the poor and near poor, no embarrassing questions at the admitting desk; hospitals had healthy endowments that were annually renewed by raising money from wealthy trustees and corporations; nurses were underpaid, house staff worked for almost nothing, and physicians' average incomes were about equal to two school teachers' salaries. In the 1950s expensive medical technology was still 15 or 20 years in the future.

Medical economics in the late decades of the 20th century may be clear to economists; I know of no physicians who have more than an inkling, and I know of no two physicians who would agree on the diagnosis, much less the remedy. Certainly for-profit managed care, masquerading under that silly euphemism, health maintenance organization, is well into the early stages of a terminal illness.

The economist Eli Ginzberg in a recent article in *Perspectives in Biology and Medicine*[1] wrote:

> Even the casual reader of the daily press must be aware of the precarious state of many for-profit managed care companies.... [they] cannot be relied upon to establish an effective and lasting linkage between the demand for health care services and the ability of the payers and patients to cover the projected steeply rising costs that once again loom ahead.

To the health insurers' threatening economic woes Ginzberg adds "the growing discomfort and opposition of sizable numbers of enrollees ..., and the continuing and growing discontent of many physicians ... who resent many of the rules, regulations, payment systems, and bureaucratic interferences...." I would include hospitals and academic medical centers that are slowly being strangled. With costs once again on a steeply rising course, and with 72 million either uninsured or inadequately insured—one in four—the present hodge-podge of a nonsystem is surely doomed. In my view we should stop the efforts to tinker with it, trying to make it work.

> The urgency of this problem is underscored by the fact that as early as 2007, annual national health expenditure is expected to pierce the $2 trillion level—only 12 years after it broke the first trillion-dollar barrier.

Ginzberg asks his readers to "consider the following" (I have abbreviated these):

- The administration and Congress propose increasing federal funding for biomedical research by 100% in the coming decade. "If past is prelude," Ginzberg writes, "such an increase would be associated with a steep increase, sooner or later, in the rate of total and federal spending for health care."
- "With their receipts from surcharges in decline, many leading hospitals are cutting back on their charity care, which in turn is increasing the numbers of patients who will face greater difficulties in obtaining critical care."
- Reducing revenues for an increasing number of community health-care Medicare and Medicaid providers will force them to cut back on the numbers of patients served.

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ROBERT U. MASSEY, M.D., Professor Emeritus, Division of Humanistic Studies, Department of Community Medicine and Health Care, University of Connecticut School of Medicine, Farmington.

- Seeking to "save" 115 billion Medicare dollars over a five-year period (the Balanced Budget Act) will further reduce funding for hospital emergency rooms and clinics that provide much of the care for the uninsured.

His suggested remedy for health care in crisis is reasonable, but too simple for politicians to accept or bureaucrats to administer. Nevertheless it is a proposal from which discussions might begin. He points out that at present the government is spending $540 billion for health care, and another $100 billion in tax subsidies to employers providing health insurance to employees. This represents 7% of the GDP—"the same proportion that the United Kingdom spends on its entire National Health Service." This, he writes, could provide essential, no-frills health insurance coverage for our entire population. He admits that there would be "silent rationing." No Viagra? No liposuction?

> Many higher income Americans will desire more, better, and quicker access to health care services.... It will be their obligation to buy private health insurance, pay out of pocket, or negotiate with their employer for additional coverage. The important point to stress is that there will be a ceiling on the total expenditures of the government sector for health care. However, that ceiling should grow as the GDP grows.

He recommends that federal and state governments continue to play "important roles in determining the numbers and types of physicians who are being trained for practice." In this regard, he would limit the inflow of International Medical Graduates to no more than 10% of the U.S. graduates. He further notes that "some leaders of the medical profession are beginning to warn of the need to reduce in the near-middle term the number of U.S. medical graduates by as much as 20% to 25%." The competitive market, he observes, has so far failed to eliminate surplus hospital beds and excess numbers of medical specialists.

And finally, he recognizes the need for cultural changes. Many of the excessive costs of medical care in America are related to unreasonable patient demand or unhealthy living: "Those who are heavily overweight, are smokers, overindulge in alcohol, become addicted to drugs, take little or no exercise, engage in unprotected sex, or engage in other types of dysfunctional behavior. ..." Those of us who have spent years caring for patients who live their lives out of control while demanding immortality could add to that list. The absence of market restraints among the richly insured adds immeasurably to this crowd who know that medicine has a pill for any problem life can pose.

Since the failed Clinton plan of 1993–94, we seem to have forgotten that the prime and perhaps only objective of governmental health-care policy should be to assure *adequate* medical care for *everyone*. The Clinton plan failed, we are told, because it was too complex; that could have been fixed, but in that failed attempt the insurance companies saw a way to take over and make a handsome profit. Result: costs are again climbing out of control, one fourth of the nation is without assurance of adequate care, the health maintenance outfits are facing a plethora of deserved regulation that will surely drive some out of business, leaving a virtual monopoly in the hands of a few.

The Ginzberg plan strikes me as reasonable but politically undoable. A similar proposal 15 years ago suggested providing full coverage for those whose income was less than two times the poverty level; for all others coverage would be available only after they had expended 10% of their annual income on medically related expenses.

These matters are too important for politicians to decide. Garry Wills, discussing a different matter, cited the Latin lament: *Quantula sapientia mundus regitur* (how ignorantly are we ruled), and observed that "Virtue and brilliance are uncommon, volatile, and distrusted. We need men we can trust, to bargain for us and with each other." We need a select committee of brilliant and virtuous persons with good judgment, a rare combination, physician and nurse leaders, medical economists, and philosophers to design a plan simple enough to be described in everyday language and transparently brilliant and morally good enough that even politicians could understand and be converted to it.

REFERENCE

1. Ginzberg E: Challenges to U.S. health care policy in the early 21st century. *Perspect Biol Med* 1999; 42:387–97.

This Month's Reading in Review

TIMOTHY B. NORBECK

"A far more serious contributor to the present meltdown has been acceptance of a new paradigm—namely the industrialization of health care wherein patients are commodified, the work force is proletarianized, and market forces shape health policy. In such a business model, the aim is to make money.... Rather than a system of managed care, what has evolved is one of managed costs. In furthering this paramount objective, time-honored clinical decision-making by doctors is curtailed."

Bernard Lown, a winner of the 1985 Nobel Peace
Prize and Chairman of the Committee to Defend
and Improve Health Care, on the state of health
care today. *Boston Globe* (1 August 1999)

"Yet it is the doctor who knows best what is best for the patient.... Congress is now debating a patients' bill of rights, and the Kaiser Family Foundation's Drew Altman got it right when he said: 'This study shows that whether you're for the Republican or Democratic approaches, there's a need to reduce the disputes between health professionals and health plans and a need for a mechanism to resolve these disputes.' What is called for is a doctors' bill of rights that will protect the caregivers of this country from being forced to break their oath, which was in force long before managed care."

From the lead editorial,
Boston Globe (1 August 1999)

Former Surgeon General C. Everett Koop, an outspoken proponent of patient empowerment, puts it this way: "One thing I've tried to do my whole life is get people to take charge of their health—and now, with managed care, I amend it to say, 'or no one else will.'"

Business & Health (July 1999)

The prize for scoring a hole-in-one at a charity golf tour in Kuala Lumpur, Malaysia, will no longer be a year's supply of Viagra.... Organizers of the Catholic Doctors' Association event say they had to pull the prize after receiving complaints that "they were promoting irresponsible use of the drug."

AP/Baltimore Sun (1 August 1999)

"The insurance companies and employers will win this time. Ultimately, however, they are doomed. Every time a family member or friend gets seriously ill, most Americans share the sentiments of the character played by Helen Hunt in 'As Good as it Gets'—health insurance companies are parasitic (expletive deleted)."

Wall Street Journal columnist Albert R. Hunt,
commenting on the mild managed-care reform
legislation passed by the Senate.
Wall Street Journal (15 July 1999)

"I certainly don't believe that excessive government involvement in health care will lead to long-term solutions, [but] modest protections won't harm the industry any more than child labor laws slowed the Industrial Revolution."

Oklahoma Republican Representative
Tom A. Coburn (and a physician) expressing his
disappointment at the mild managed-care reform
legislation passed by the Senate.
New York Times (30 July 1999)

"But when a '24-year-old HMO functionary who knows as much about medicine as he does about cartography' (Herdrich *vs* Pegram, 154 F. 3d 362; 7th Circuit, 1998) decides that a plan participant does not need life-saving surgery, despite the advice of the participant's treating doctors, we're talking about a medical decision. Plans pay only for medical treatment that is 'reasonably medically necessary.' How can the determination of whether a treatment is 'reasonably medically necessary' be other than a medical decision? It can't."

Attorney Ronald Dean, on how health plans
try to disguise medical decisions as benefit
decisions, allowing ERISA to unfairly deflect
medical liability.
The State of Health Care in America 1999

"Too many lawyers are more committed to their own economic interests than to a sensible legal system. Lawyers simply won't face the contradiction between their incomes and their professional responsibilities. The only real hope for change comes from legal malpractice suits. If enough lawyers become victims of today's system, they may grasp the wisdom of changing it."

Newsweek columnist Robert J. Samuelson,
Forbes (5 July 1999)

(continued on next page)

TIMOTHY B. NORBECK, Executive Director, Connecticut State Medical Society, New Haven.

Physicians take the Hippocratic oath to "do no harm," but there is no such vow for scientists. 1995 Nobel Peace Prize winner Joseph Rotblat thinks there should be: "A solemn oath … would, at the least, have an important symbolic value, but also might generate awareness and stimulate thinking on the wider issues among young scientists," he said at a recent conference.

Chicago Tribune (15 August, 1999)

In 1996, the most recent year for which numbers are available, Americans made 744 million trips to the doctor, an average of 3.4 visits per capita. The most frequent diagnosis given was primary hypertension—accounting for 27.7 million visits.

National Center for Health Statistics
Los Angeles Times (9 August 1999)

Only in America: A lawyer defending a man accused of burglary tried this creative defense: "My client merely inserted his arm into the window and removed a few trifling articles. His arm is not himself, and I fail to see how you can punish the whole individual for an offense committed by his limb." "Well put," the judge replied. "Using your logic, I sentence the defendant's arm to one year's imprisonment. He can accompany it or not, as he chooses." The defendant smiled. With his lawyer's assistance he detached his artificial limb, laid it on the bench, and walked out.

Desert Exposure-New Mexico
(August 1999)

MARK YOUR CALENDAR

Connecticut State Medical Society

Semiannual Meeting—House of Delegates

17 November 1999

11:30 A.M.—Registration and Luncheon

12:30 P.M.—Call to Order

Ramada Inn, 275 Research Parkway, Meriden

Plan Now to Save the Date

Letters to the Editor

Letters to the Editor are considered for publication (subject to editing and abridgement), provided that they are submitted in duplicate, signed by all authors, typewritten in double spacing, and do not exceed 1-1/2 pages of text (excluding references). They should not duplicate similar material being submitted or published elsewhere. Letters referring to a recent Journal article should be received within six weeks of the article's publication.

Documentation or Hyper-documentation?

Letter to the Editor: In his essay, "Data, Documentation, and Trust" (*Conn Med* 1999; 5:303) Dr. Crombie speaks for most of us when he laments the pressure that all physicians are under to document everything they do. How many times do we hear at staff and departmental meetings the mantra "If it isn't written down, it didn't happen."? This push that is driven mostly by health-care insurers is changing the relationship we have with our patients.

For example, the pressure to document has made it necessary to cut down on face-to-face conversation with patients. The patient may be seated right in front of you, but you give the impression that you are not as concerned about his or her symptoms as you should be, because you are too preoccupied making sure that enough systems have been examined and the "appropriate" questions have been asked.

Visions of a Medicare fraud-and-abuse squad coming into our waiting rooms frightens all of us. But the possibility of a well-intentioned, but misguided patient-turned-vigilante turning us in for a small reward is even worse. One wonders about the character and judgment of those who proposed this policy and how did it ever get by our legislators' radar system. The only thing that all this documentation accomplishes is that it makes physicians more inefficient. Taking the time to compose office notes that are in compliance with the regulations of private insurers and Medicare detracts from the time doctors spend with patients and diverts their attention—both of which are harmful to patients.

As a primary-care doctor, I have noticed that the consultation reports that I receive from some of my colleagues are getting unnecessarily longer and more detailed. I feel sorry for them. Dictating such long reports must take up lots of valuable time. I can remember 10 years ago, consultants calling me up, telling me what their plans were and asking me if I wanted a written report. I usually said no and made it clear that I appreciated the phone call. The patient got good care, I made contact with my consultant, and the consultant was saved time and money by cutting down on dictation service. It was effective and quick; the opposite of the mindless games that we have been forced into playing today.

Being a physician these days is an awesome challenge. Some feel so beset by outside intrusions that if they had other skills to market, they would leave the profession altogether.

This imperative to hyper-document started 20 years ago, when insurers told us to write extensive notes to protect ourselves in case of a malpractice suit. Managed care took it a step further by making our ability to get reimbursed dependent on documentation. But, Medicare's fraud-and-abuse campaign is blatant overkill. It represents bureaucracy out of control. It has turned documentation into a cost-control strategy that demeans physicians' honor and integrity. Though there has been some discussion with the parties responsible for the "documentation imperative," substantial relief has not come.

The hassle that unnecessary documentation provokes has no place in medical practice. Wearing physicians down, browbeating them, and demoralizing them detracts from their ability to take care of patients. It is a national disgrace—the type of treatment that may be appropriate in a tyrannical regime; but certainly out of place in the world's greatest democracy.

Our legislators need to hear more about this issue.

Edward J. Volpintesta, M.D.
Bethel

"50 Years Ago"

Letter to the Editor: It was of interest to me to find on my return from celebrating my 50th anniversary of graduation from the University of Edinburgh that the August issue in its section on "50 Years Ago" contained a commentary on Foreign Medical Credentials. The concern expressed there was about foreign born graduates of foreign medical schools coming to the United States. I was not one of those, since I was a native of the United States. But why did I go to a foreign medical school? How well known is it that 50 years ago there was covert quota limiting the number of Jews who would be accepted in American medical schools? Though I graduated *cum laude* and had an advanced degree in psychology from Columbia University, I could not find a place in an American school. I was highly elated to find that the application from Edinburgh was the first form I had seen which did not ask what my religion was. Has that changed now in our country? You can understand my feeling of gratitude revisiting the lovely city of Edinburgh which had accepted me, when my own country had closed its doors to me.

The same issue of the Journal also notes that 1949 was the centenary of the birth of Sir William Osler. It failed to note that 1999 also marked the 80th anniversary of his death. Dr. Osler, born in Canada, and received his medical education in that country, went on to bridge the ocean, teaching in Philadelphia, becoming the first professor of medicine at Johns Hopkins, going on to the chair of medicine at Oxford. He also delivered an address at Yale in 1913. He illustrates the value of cross pollination, the benefits of crossing boundary lines, the advantages of avoiding chauvinism, of accepting the universality of knowledge, and caring, and sharing.

The challenge now is to learn the lessons from the history of 50 years ago.

Leo H. Berman, M.D.
Westport

Lyme Disease Vaccine—LYMErix

Letter to the Editor: The Medical Letter that was printed in your [*Conn Med* 1999; 63:488] journal stated that the long-term safety of LYMErix is worrisome. The evidence from several clinical trials with LYMErix is contrary to this speculation. In clinical trials, in which subjects have been followed for up to five years, LYMErix has been well tolerated.

The hypothesis regarding the potential for the induction of an inflammatory arthritis was prospectively addressed by SmithKline Beecham and an outside independent panel of experts, the Data Safety Monitoring Board (DSMB). In the LYMErix clinical trial of 10,936 subjects, no association was observed between the use of LYMErix and arthritis in general. A post-hoc analysis of participants with pre-existing musculoskeletal conditions or a history of prior Lyme disease similarly revealed that there was no association between LYMErix and arthritis. The DSMB reviewed cases of arthritis and persistent arthralgias during the first year of the trial and at the completion of the trial and found that there was no difference between the vaccine and placebo recipients with regard to the incidence of arthritis, specifically inflammatory arthropathy.

To date, approximately 750 subjects have received booster doses. Some subjects have received up to five doses of LYMErix. LYMErix has been well tolerated and there is no evidence that the additional doses have been associated with a higher incidence of adverse events. To date, no definite vaccine-related serious adverse events have been reported and no new cases of new onset of inflammatory arthritis have been reported. In addition, over 900,000 doses have been distributed with no unusual pattern of adverse events noted.

LYMErix marks a significant advance in Lyme disease prevention, being the only proven effective method for Lyme disease prevention. The ACIP/CDC recommends that LYMErix should be considered for people who live, recreate, work in high and moderate endemic areas and have frequent and prolonged exposure to vector ticks.

Dennis Parenti, M.D.
Director, Adult Vaccines
SmithKline Beecham Biologicals
Collegeville PA 19426

CALL FOR PAPERS

Members of the Connecticut State Medical Society reading papers before other organizations are invited to submit their papers to the *Journal* for consideration. Authors preparing manuscripts for submission to *Connecticut Medicine* should consult **Information for Authors**. This is published in most issues of *Connecticut Medicine* or may be obtained from the *Journal* office. Adherence to the instructions will prevent delays both in acceptance and in publication.

Papers prepared on a word processor should be submitted on a diskette along with the hard copy.

Please send them to:

H. David Crombie, M.D., Editor
Connecticut Medicine, 160 St. Ronan Street, New Haven, CT 06511

BOOK REVIEWS

Steering Clear of Highway Madness: A Driver's Guide to Curbing Stress and Strain

by John A. Larson, M.D.
189 pp, epilogue, bibliography
Book Partners, Inc. Wilsonville, Oregon, 1996.
$14.95. ISBN 1-885221-38-X

Like many of us, Dr. John Larson, a veteran psychiatrist practicing in Norwalk, Connecticut, learned about driving and drivers from his father to whom this book is dedicated. While he may have learned some skills, he also learned some attitudes of conduct behind the wheel, which, with due respect for his paternal mentor, he later learned to change. After observing and clinically treating stress and its consequences, and seeing the myriad reports of road rage-to-attempted murder-to-overt homicide on the highways of this country, the author has written an analytical, easily readable book advising the Type A personalities among us how to change our ways behind the wheel.

We are reminded of our attachment to the automobile in the daily flood of advertising that saturates our senses. To be more precise, the print and electronic media remind us of our capacity to make our motor vehicles extensions of ourselves, for good or ill. One need not be a *Car And Driver* reader to get the message. Consider this fold-out advertisement in a recent issue of *Time Magazine*: horsepower–222, stereo speakers–7, stereo watts–200, top speed–143 m.p.h., all contained in a conventional family car. For one who wants more, there's this set of particulars in a recent *New York Times*: 8.0 liter, V-10, 450 horsepower, zero to 60 m.p.h. in 4.1 seconds! How about that to scorch the fellow who nestles a little too close to your rear bumper at a stop light.

The author illustrates with vivid examples the emotional states from anxiety, to impatience, to resentment, to anger, to overt rage that can be triggered behind the wheel, converting Dr. Jekyl into Mr. Hyde, and the peaceful passenger into panicked putty. He characterizes the anger quotient on a scale of zero to ten, from relaxed, to ready-to-kill, and offers a self-assessment questionnaire for the reader to score his/her own reaction profile. The central five chapters elaborate the five bad-driver types and words of wisdom for them. The Speeder, whose byword is, "Make Good Time," is admonished to Make Time Good; The Competitor, who must be Number One is counseled to find sources of enhanced self-esteem elsewhere than in the driver's seat; The Aggressor, with his "Try and Make Me" philosophy is asked to become a "Be My Guest" type; The Narcissist, shouting "They Shouldn't Allow It" needs to practice a bit of Live and Let Live; and the final profile, The Vigilante, who always wants to "teach 'em a lesson," is advised to leave punishment to the police.

The reader is offered formats for memorization cards containing the elements of a calmer, more peaceful approach to driving to accomplish these behavioral changes. Reviewing them daily, and prior to a trip, is deemed essential. Add to this some favorite music, books on tape, an appreciation of the beauty of the surroundings, and a modicum of regard and deference for others in the vehicle and the driving experience is less stressful to the health of the driver and less threatening to the lives of others.

The final section of the book, an epilogue, finds the author out on a bit of a limb but true to his beliefs about the pervasive influence of stress on the development of human disease, (including the misspelled "Chrone's" Disease). This does not detract from the value or readability of the book. This is a self-help book, with numerous self-help references in the bibliography, and many will find after reading it that they have found some help in their automobile-driving habits and attitudes. Its strength is derived most of all from the professional observations and experiences of its physician-author.

H. David Crombie, M.D.
Editor

The Legal Desk Reference for Healthcare Professionals: Connecticut

by Robert Walzer, M.D., 650 pp,
Rutledge Books, Danbury, Connecticut, 1998.
1-800-278-8533, <info@rutledgebooks.com>
ISBN 1-58244-044-1

In today's world of managed care, increasingly burdensome medical-legal matters seem to pop up at the most inopportune times, and this easy-to-read reference guide to the law and its interpretation is a valuable contribution to anyone responsible for patient care, but to physicians in particular. Unlike most other attorneys commenting on medical laws, author Robert Walzer speaks the language of physicians, undoubtedly because of his many years of medical practice before pursuing his legal career.

Physicians and others interested in health-care law will find this an invaluable addition to the office bookshelf, and an up-to-date friendly resource on the numerous legal issues that can arise in the course of a medical practice. Even the "Principles of Cooperation in Medical-Legal Matters" adopted in 1998 by the Connecticut State Medical Society and the Connecticut Bar Association are included in an appendix.

If "collateral sources," *res ipsa loquitur,* "joint and several" or "*ex parte* communications" are just words to you, count your blessings to date. Dr. Walzer's topics are as varied and comprehensive as licensure and revocation, discipline and peer review, privilege and confidentiality, DNR and life support, tort and immunity, professional practice and employment, fraud and abuse, antitrust, networks and unions, duty to notify, warn, and report. It's all here, and it's specific to Connecticut. Dr. Walzer is to be commended for his comprehensive and painstaking effort to make life a little less complicated for physicians.

Timothy B. Norbeck
North Haven

2000 International Conference on Physician Health

MEETING NOTICE

"CALL FOR PAPERS"—The 2000 International Conference on Physician Health cosponsored by the American Medical Association and the Canadian Medical Association has issued a CALL FOR PAPERS.

The meeting will be held at Seabrook Island, South Carolina on March 29–April 2, 1000.

For a copy of the abstract Submittal Form contact: Elaine Tejcek, (312) 464-5073; or email: <elaintejcek@ama-assn.org>.

Deadline for submittal is October 31, 1999.

Update and Review of Internal Medicine 1999

October 10–15, 1999

Hilton of Santa Fe
Santa Fe, New Mexico

Presented by the University of New Mexico Health Sciences Center School of Medicine and Beth Israel Deaconess Medical center, a major teaching affiliate of Harvard Medical School. *The dates of this course coincide with the Albuquerque International Balloon Fiesta. Make plans now to attend.*

Credits available: A maximum of 47.0 hours in AMA Category 1 credit and 46.0 prescribed hours by the American Academy of Family Physicians.

Who should attend? Practicing internists and family practitioners interested in refreshing their knowledge of internal medicine. Physicins preparing for the recertification examination or the internal medicine boards.

For more information, contact: The University of Mexico Office of Continuing Medical Education, Medical Building 2, Room 101, Box 713, Albuquerque, New Mexico 87131. Telephone (505) 272-3942 or Fax (505) 272-8604 or visit our web site at <http://hsc.unm.edu/cme>.

Consumer Alert

Federal Trade Commission • Bureau of Consumer Protection • Office of Consumer and Business Education

Virtual "Treatments" Can Be Real-World Deceptions

Washington, D.C.—Unscrupulous marketers are using cyberspace to peddle "miracle" treatments and cures to vulnerable consumers. Many of their advertisements, which feature exotic potions and pills, special curative diets, or "newly discovered" treatments, contain questionable claims about the effectiveness and safety of these products or services. So says the Federal Trade Commission (FTC), which found the misleading or deceptive advertisements while surfing the Internet.

Misleading offers for products and treatments for heart disease, cancer, AIDS, diabetes, arthritis, multiple sclerosis, and other medical conditions could be costly in several ways, according to the FTC. Consumers could lose their money and increase their health risk, especially if they delay or forego proper medical treatment. The FTC advises consumers to consult their doctor, pharmacist, other health-care professional, or public health organizations before purchasing any product or treatment with a claim that sounds too good to be true.

The FTC cautions consumers who have a serious or chronic illness to be wary as they consider ads for products or services to treat their conditions—whether the pitches are made on the Internet, television or radio or in newspapers, magazines, or brochures—and to ask themselves one very important question: If a medical breakthrough really has occurred in the treatment of a serious illness, would the news be announced first in an advertisement?

How can you tell if an advertising claim for a "miracle" health-related product is likely to be phony, exaggerated, or unproven? the FTC says these tip-offs generally signal a rip-off:

- phrases like "scientific breakthrough," "miraculous cure," "exclusive product," "secret formula," and "ancient ingredient."
- use of "medicalese"—impressive terminology to disguise a lack of good science.
- case histories from "cured" consumers claiming amazing results. Their testimonials also imply that their experience is typical for consumers using the product or service. When you see a testimonial, ask for proof of its "typical" nature.
- a laundry list of symptoms the product cures or treats.
- the latest trendy ingredient touted in the headlines.
- a claim that the product is available from only one source, for a limited time.
- testimonials from "famous" medical experts.
- a claim that the government, the medical profession, or research scientists have conspired to suppress the product.

If you have a complaint about a supposed medical product or service, file it with the FTC through the online complaint form at www.ftc.gob or by calling toll-free 1-877-FTC-HELP (382-4357). Although the Commission cannot resolve individual problems for consumers, it can act against a company if it sees a pattern of possible law violations.

For more information about how to identify fraudulent health product and treatment claims, visit the FTC online at www.ftc.gov—click on Consumer Protection.

June 1999

CSMS PHYSICIAN PLACEMENT SERVICE

The Society maintains the Physician Placement Service as a *free* service to the medical profession, hospitals, and communities in Connecticut.

***Opportunities* should be typed, double-spaced copy on letterhead and submitted to CSMS, Physician Placement Service, 160 St. Ronan Street, New Haven, CT 06511 (203) 865-0587 or fax to (203) 865-4997. These will be published as space permits and will be distributed to physicians inquiring about such *opportunities*.**

***Physicians wishing to locate* in Connecticut may call the office requesting opportunities in their specialty. Also, candidates are invited to submit a resume to be kept on file with the Society. An announcement of a physician's availability will be published in two issues of *Connecticut Medicine* as space permits.**

Listing of physicians in the Placement Service does not in any way represent certification by the Society. Investigation of credentials and experience is the responsibility of those seeking applicants for positions.

Announcements on the Physician Placement Service page under Classified Advertising are charged at the regular Classified Advertising rate.

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Ambulatory care center in southwestern Connecticut seeks physician BC/BE for full/part-time employment. Well-rounded background in treatment of acute minor illnesses and injuries required. Excellent patient relation skills a must. Wonderful community, excellent staff and pleasant working conditions. Competitive salary and benefit package offered. Please submit CV to: Mr. Louis S. Basilicato, P.O. Box 9473, New Haven, CT 06534.

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Northeast's largest and growing occupational screening practice seeks GP. This is a nontraditional (mobile) environment involving well-care examinations for industrial workers for OSHA compliance purposes. Excellent opportunity for physician seeking a change from straight medicine. Position shall mature into Medical Directorship as practice grows. Extensive travel throughout northeast is required. Excellent income and benefits package. For more information, send CV to the attention of John Crowne, Mobile Medical Testing Service, 71 West Dudleytown Rd., Bloomfield, CT 06002.

INTERNAL MEDICINE

We are looking for an associate in internal medicine or family medicine. Four physician office specializing in internal medicine (primary care), pulmonary medicine and health risk management. Innovative practice. Competitive salary, immediate start date. Telephone (203) 853-1919 and ask for Sandy.

Unique opportunity for medical physician to work in Physical Medicine/Holistic Medical office, located in southern Litchfield County. Excellent long term growth potential. Competitive salary. Please mail CV to: Woodbury Holistic Medical, P.O. Box 595, Woodbury, CT 06798.

BC/BE internist desired for a large multispecialty practice in and around Hartford, Connecticut. Competitive salary and benefits offered within our growing organization. Please send letter of interest with CV to: Prime HealthCare, Human Resources, 30 Jordan Lane, Wethersfield, CT 06109.

Seeking BC/BE internal medicine physician to join busy New Haven area medical practice serving Medicare and nursing home population. Prompt availability necessary. Fax CV to (203) 248-2881.

Solo, internal medicine practice for sale, greater Waterbury Connecticut area. Established 13 years. Medicare/HMO—no Medicaid or capitated plans. Includes practice, equipment and well kept handicap accessible building with offstreet parking. Owner leaving private practice. Willing to stay for short-term to introduce to patients. Very reasonably priced. Call (203) 597-1807.

PART-TIME

Seeking a part-time internist to share busy solo practice. Work two or three days a week. Flexible arrangements can be made. Please call to discuss details, (860) 350-6797 or (860) 868-9565 evenings.

Seeking part-time primary care physicians to work at Cornerstone of Eagle Hill, a free standing alcohol and chemical dependency unit in Sandy Hook, Connecticut. Weekends and/or weekdays available. Flexible hours and excellent compensation. Please fax CV to: (203) 426-2821, attn: Dr. Douglas Astion.

Part-time/full-time M.D./D.O. needed for busy multidisciplinary office in Shelton, Connecticut. No evenings, weekends or beepers. Fax CV to (203) 926-1220 or call (203) 929-5500.

PRIMARY CARE

Opportunity for BC/BE internist to join a busy solo practice in East Hartford, Connecticut. Interest in pulmonary medicine and multi-lingual ability an advantage. For immediate consideration, fax CV to (860) 282-2726.

Established primary care/internal medicine practice located in southeast shoreline community for sale. Excellent opportunity. Complete turnkey operation including lab, x-ray, equipment, excellent staff and solid patient base. Favorable lease with purchase option. Principal willing to assist with transition or remain in limited capacity. Please reply to: PC/RT c/o CSMS.

RADIOLOGY

Radiology practice for sale. Exceptional opportunity, Fairfield County, 1,100 square foot office condo with possibility to expand, professional office building. Ultrasound and mammography accredited. Please respond to RP/MW c/o CSMS.

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Currently seeking full-time/part-time (IM/FP) BC/BE physician with focus on women's issues to join a multi-service, freestanding, physician owned medical facility providing outpatient preventive medicine and primary care exclusively to women. Limited in-patient physician responsibilities. The medical practice consists of two full-time primary care physicians, physician's assistant, two nurse practitioners in adult medicine, a nutritionist with individual weight loss and cholesterol reduction programs, two psychotherapists, ACR accredited mammography, ultrasound, bone densitometry and adjoining laboratory. Women's Care is proud of its comprehensive approach to medical care and health care maintenance and welcomes you to join our team of health care professionals committed to women's issues and education. For more information, contact: Caryn Nesbitt, M.D., Medical Director, Women's Care Medical Center, P.C., 85 Poheganut Dr., Groton, CT 06340; (203) 448-6303.

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Available January 2000. Licensed in Connecticut. Passed National Boards. American Board certified. M.D. at Baylor College of Medicine. Internship and residency at University of Miami Affiliated Hospitals. Seeking to join a practice, or an institutional, industrial or pharmaceutical position within commuting distance from Southington. Please respond to IM/HO c/o CSMS.

PART-TIME

Available with two weeks notice. Licensed in Connecticut. General practice physician seesk part-time position, preferably in a walk-in facility. Experience in private practice, emergency room and walk-in facilities. Please respond to: GP/SJ c/o CSMS.

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Available September 1, 1999. Licensed in New York, New Jersey and California. Passed National Boards. American Board certified. M.D. at St. Louis University School of Medicine. Internship and residency at Beth Israel Hospital, New York City. Seeking to take over a solo practice from a retiring pediatrician, or to buy a practice. Please respond to: P.O. Box 361, Short Hills, NJ 07078-0361.

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Available immediately. Licensed in Georgia, Florida, New York and Texas. Passed National Boards. American Board certified. M.D. at SUNY, Syracuse. Internship at Robert Packer Hospital. Residency at Emory University. Please respond to: Steve Edelson, M.D., 6900 Preston Rd., #1122, Plano, TX 75024; telephone (972) 208-3719.

PRIMARY CARE/ADDICTION SERVICES

Available October 1999. Licensed in Connecticut. Passed National Boards. American Board certified. M.D. at Georgetown University. Internship and residency at St. Vincent's Hospital, New York City. Specializing in OB-GYN, Primary Care and Addiction Services. Please respond to John W. Paggioli, M.D., 728 Paddock Ave., Meriden, CT 06450; telephone 203-237-3740.

Consumer Concern or Complaint Form Regarding Group or Individual Health Insurance Including Managed Care Plans

To Be Submitted To
THE CONNECTICUT DEPARTMENT OF INSURANCE
CONSUMER AFFAIRS DIVISION
P.O. BOX 816
HARTFORD, CT 06142-0816

Phone: (860) 297-3900 or 1-800-203-3447 Fax: (860) 297-3872

The Consumer Affairs Division of the Department of Insurance receives, reviews, and responds to complaints and inquiries from state residents concerning insurance related problems. The staff examines each complaint to determine whether statutory requirements and contractual obligations within the commissioner's jurisdiction have been fulfilled. The Consumer Affairs Division coordinates the resources available within the Department to address consumer complaints.

In order for the Division to pursue a formal review of a concern or complaint, the consumer must submit a written explanation to the address listed above with as much pertinent detail as possible. Each written submission to the Consumer Affairs Division will be acknowledged.

Name of person filing the concern or complaint:

____

Address: ____

Phone where the Department can contact you: (_____) ______________________________

This concern or complaint concerns the following Insurance Company or Managed Care Plan: ______________________________

Policy Number: ______________________________

Name of Policyholder: ______________________________

Name of Enrollee: ______________________________

Name of Patient: ______________________________

Patient is ___ **self** ___ **dependent** ___**other** (explain)______________________________

The following is a detailed description of the concern or complaint:

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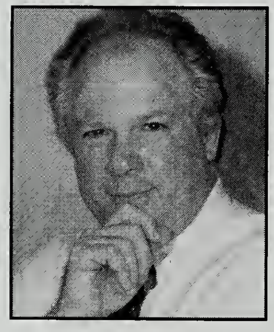

Probably not. But most do not realize that they'll still need 80% of their current income in retirement.

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Pneumomediastinum: Retroperitoneal Pathway

MORTON G. FELDMAN, M.D., AND HERB LUSTBERG, M.D.

ABSTRACT—This is the first *in vivo* demonstration of the pathway of the gaseous column arising from an intra-abdominal source, traveling in the retroperitoneal space alongside the great vessels into the mediastinum, resulting in a pneumomediastinum.

HOW does the gaseous material get into the mediastinum from a subdiaphragmatic perforated viscus?

This is the first *in vivo* demonstration of the pathway of air from a perforated diverticulitis causing pneumomediastinum. Utilizing a 3-D Analysis Advantage Windows 2.0 software, an abdominal and chest computed tomography (CT) scan were reconstructed and reformatted into three-dimensional sagittal volumes. This computer technology clearly demonstrated the source of the retroperitoneal gaseous column and the pathway alongside the great vessels into the mediastinum.

Case Report

A 44-year-old male was admitted to the hospital because of abdominal and chest pain.

The patient, a reformed drug addict with a two-year history of diverticulitis, was asymptomatic until a week prior to admission when he noted left sided low-back pain. Three days before admission the patient experienced progressive abdominal pain, increasing abdominal distension and multiple loose stools. On the day of admission, the abdominal pain became more severe and was associated with the onset of substernal pain. There was no history of vomiting although the patient felt nausea.

Physical examination revealed an acutely ill, pale, delirious man. Neck crepitus was present. The lungs and heart were normal. The abdomen was distended with signs of peritonitis and severe left lower quadrant pain. The peristaltic sounds were hypoactive. A rectal examination revealed a fullness on the left side.

The patient's temperature was 102.2° F, the pulse 110, and the respirations 20. The blood pressure was 100 systolic, 50 diastolic.

A CT scan of the abdomen and chest disclosed mediastinal and retroperitoneal air, as well as free air in the leaves of the mesentery and abdominal cavity (Figs. 1–3). The horizontal cuts were reformatted and reconstructed into 3-D sagittal sections (Fig. 4 A–D).

Emergency abdominal surgery revealed perforated sigmoid diverticulitis and a pelvic abscess containing gas and fecal material. A Hartmann procedure was performed with resection of the diseased sigmoid colon and drainage of the pelvis and mediastinum. Culture of the abscess cavity revealed a mixed flora of gram-negative rods and gram-positive bacteria. Broad spectrum antibiotics were administered during an uneventful 10-day postoperative hospital course.

Five months following the initial resection and colostomy, bowel continuity was reestablished. Since the initial surgical procedure over a year has passed without any significant medical problems.

Discussion

The causes of pneumomediastinum are alveolar rupture, tracheobronchial injury, esophageal perforation, head and neck surgery or trauma, abdominal surgery or trauma,

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MORTON G. FELDMAN, M.D., Senior Attending Surgeon, Saint Vincent Hospital, Bridgeport; HERB LUSTBERG, M.D., Resident, Radiology, Saint Vincent Hospital, Bridgeport

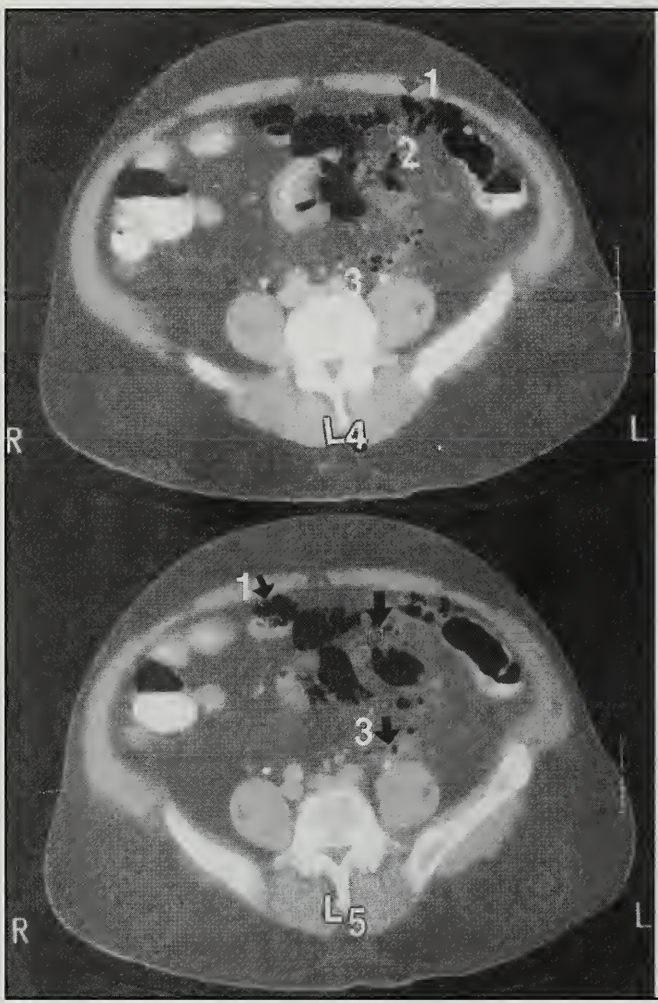


Figure 1.—CT Scan level L4 and L5 vertebra: 1) free air in peritoneal cavity; 2) air in route of mesentary and retroperitoneal abscess; 3) air adjacent to left ureter and iliac vessels.

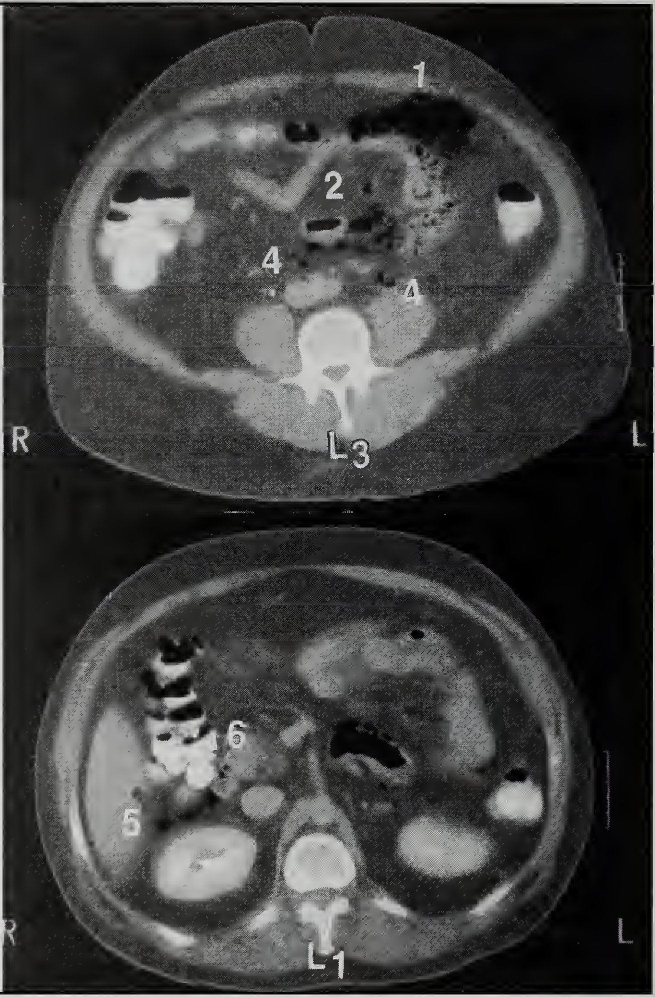
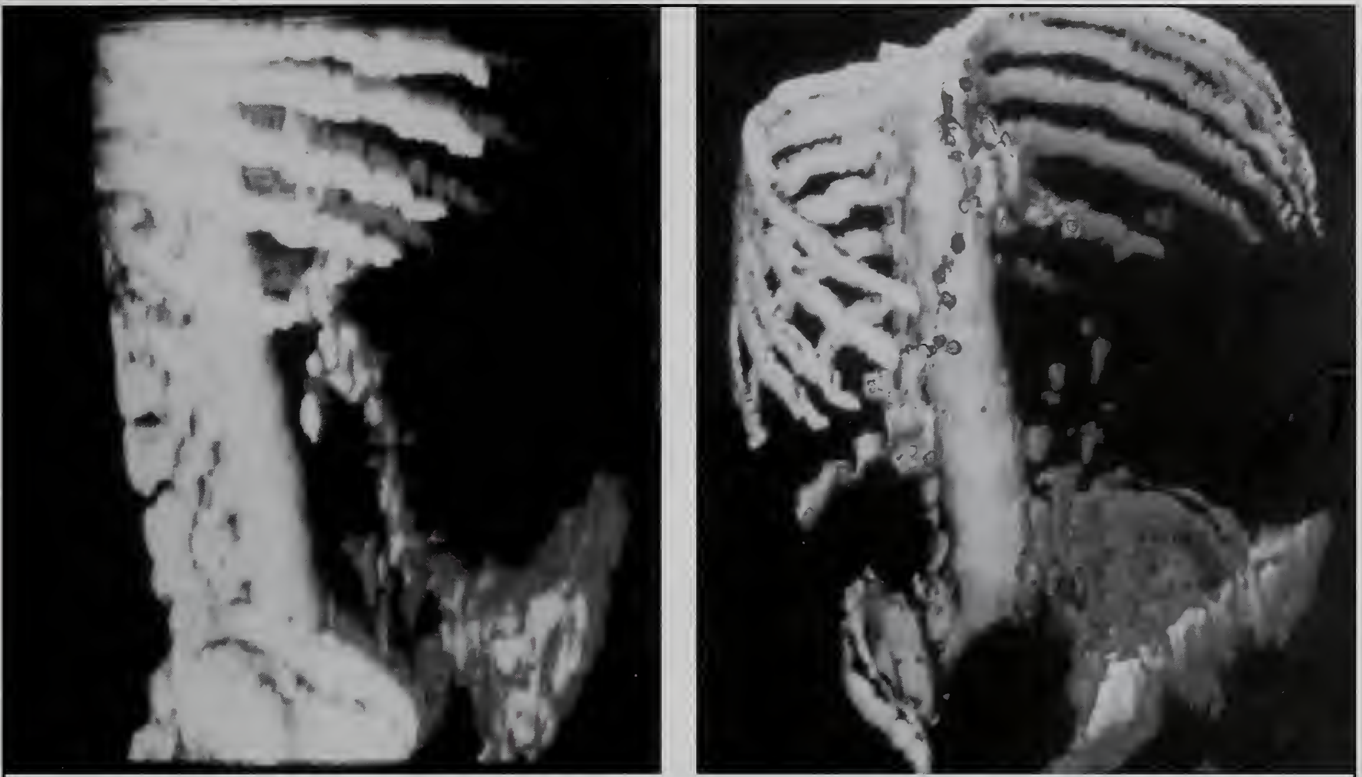


Figure 2.—CT Scan level L1 and L3 vertebra: 1) free air in peritoneal cavity; 2) air in route of mesentary; 4) air alongside bifurcation of aorta and left ureter; 5) air in perirenal space; 6) air adjacent to vena cava.

and perforated viscus.[1-3] In the 1950s, as retroperitoneal pneumography came into widespread use by urologists, "emphysema" of the mediastinum was described as a complication.[4] Today a number of reports have cited air in the mediastinum as a complication of endoscopy and laparoscopic procedures.[5-7]

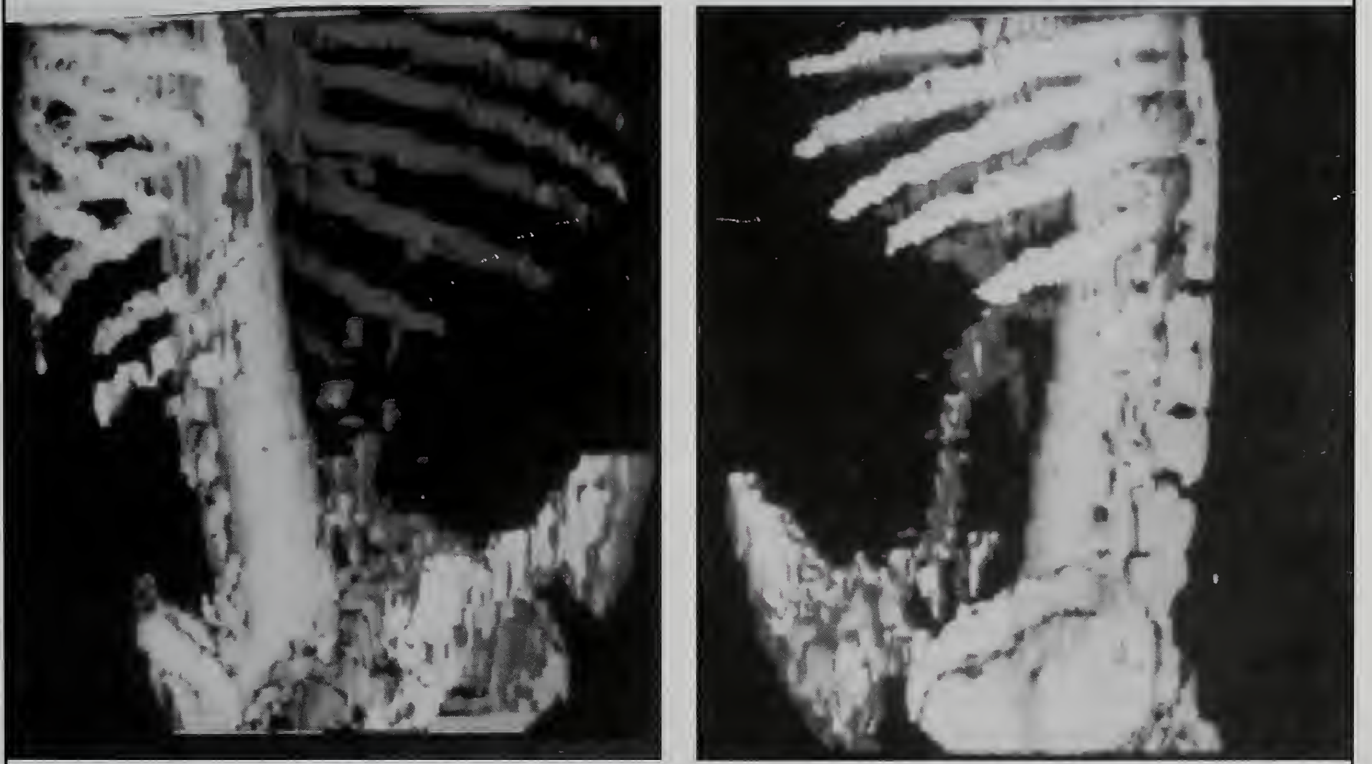
In the 1970s, utilizing cadaver studies, the classic description of air from the retoperitoneum into the mediastinum was outlined.[8] The retroperitoneal pelvic space ascends into three extraperitoneal spaces or compartments with indistinct boundaries: the anterior pararenal space, the perirenal compartment, and the posterior pararenal space. The anterior space contains portions of the duodenum, pancreas, and ascending and descending colon. The perirenal compartment contains the kidneys, ureters, cisterna chyli, and great vessels. The posterior space contains blood vessels, lymphatics, but no major organs. The fused pelvic extraperitoneal space contains the rectosigmoid, iliac vessels, and portions of the genito-urinary organs. The accepted mode of dissection of air from a perforated diverticulum resulting in pneumomediastinum, is passage from the retroperitoneal pelvic space to the anterior pararenal and perirenal compartments; alongside the kidney, vena cava, and aorta; behind the crus of the diaphragm; through the aortic hiatus and caval foremen; into the mediastinum. The 3-D reconstructed CT scan (Fig. 5) illustrates the pathway: #1, abscess cavity and gaseous content dissecting into retroperitoneal space; #2, air in leaves of mesentery; #3, air alongside left ureter and iliac vessels; #4, air at bifurcation of aorta, and alongside the aorta; #5, air in the perirenal compartment; #6, air alongside the vena cava; #7 and #8, through the aortic hiatus and caval foramen; #9 and #10, air in the mediastinum.

This unusual presentation of pneumomediastinum illustrates the pathway of gaseous matter of gastrointestinal origin. A perforation of the second portion of the duode-



A) Right lateral

B) Right oblique (viewing top down)



C) Right oblique

D) Left lateral

Figure 4.(A–D). 3-D sagital sections reformatted and reconstructed from CT-scan of abdomen and chest.

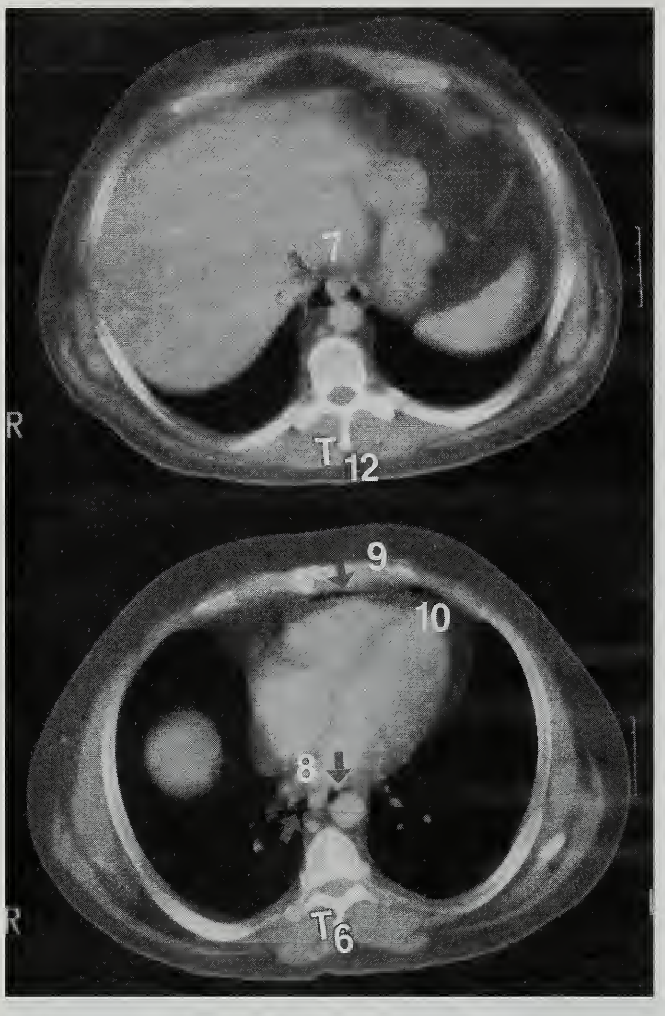


Figure 3.—CT Scan level T12 and T6 vertebra: 7) air alongside aortic hiatus and caval foremen; 8) air in mediastinum alongside aorta and distal esophagus; 9-10) air in anterior mediastinum, anterior to pericardium.

num can travel along the cava or aorta into the mediastinum. A retrocecal appendicitis can rupture into the perirenal compartment and up alongside the great vessels, as can any ascending or descending colonic perforation. Endoscopic tears with air insufflation and laparoscopic surgery with retroperitoneal injection of CO_2 can course its way into the mediastinum alongside the only structure common to the abdomen and chest ... the great vessels.

Summary

An unusual case of pneumomediastinum exquisitely illustrates the retroperitoneal pathway of air originating from ruptured sigmoid diverticular abscess.

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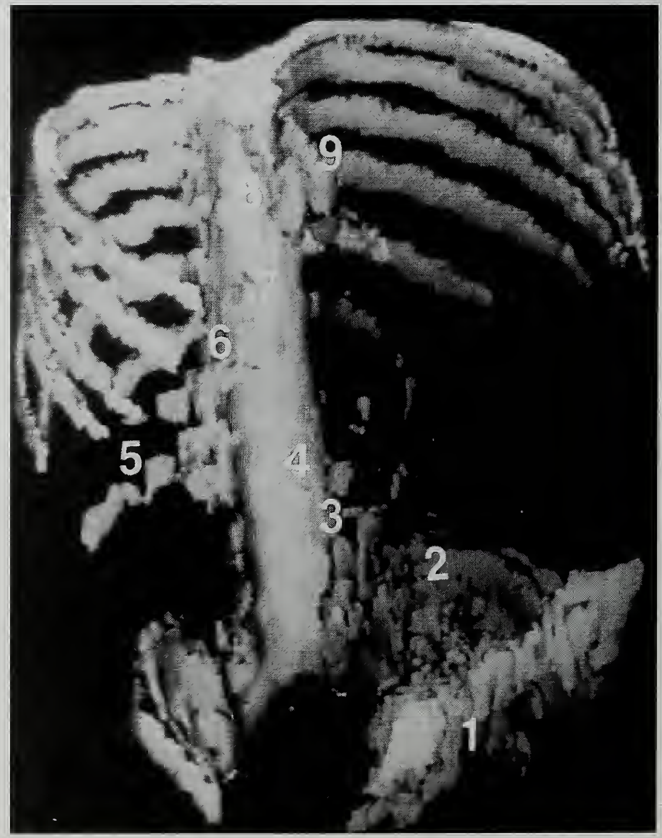

Figure 5.—Reformatted 3-D oblique view. Numbered area marks air arising from perforated diverticulitis coursing into retroperitoneal space up to anterior mediastinum (see Fig. 1 and Fig. 2 for # description and text).

Low-Dose Vincristine-Associated Bilateral Vocal Cord Paralysis

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ROBERT B. ERICHSON, M.D., MICHAEL H. BAR, M.D., K. M. STEVE LO, M.D.,
NEIL S. COHEN, M.D., AND ISIDORE TEPLER, M.D.

ABSTRACT—*Background:* Vincristine-associated peripheral neuropathy is a well-described entity. We describe a case of vincristine-induced vocal cord paralysis, which is a rare complication of this drug. We report herein the second case of bilateral vocal cord paralysis in a patient receiving conventional doses of vincristine. *Objective:* To present a case report of vincristine-associated vocal cord paralysis and to review the relevant English language literature on this subject. *Design:* Report and review of the literature. *Setting:* Outpatient community cancer center. *Patient:* A 58-year- old female with a diffuse large cell lymphoma stage IV receiving cyclophosphamide, doxorubicin, vincristine, and prednisone. *Results:* Bilateral vocal cord paralysis occurred in this patient receiving vincristine as part of her chemotherapy regimen. In addition to this case there have been a total of 25 prior reports, which are reviewed in the text. *Conclusion:* The incidence of bilateral vocal cord paralysis in patients receiving vincristine on the usual low-dose schedule is low. Prompt withdrawal of the offending agent results in prompt recovery without untoward long-lasting sequela.

Case Report

A 58-year-old female presented with heavy vaginal bleeding. A transvaginal sonogram revealed a thickened endometrial stripe and an endometrial biopsy was suspicious for "adenosarcoma of the uterus." She underwent an exploratory laparotomy, TAH/BSO, and peritoneal washings. No evidence of metastatic disease was found. Final sections revealed diffuse large cell lymphoma, B-cell type, involving the endometrium. The cervix, tubes, and ovaries were negative for tumor. Staging CAT scans of the chest, abdomen, and pelvis were negative. Subsequently a bone marrow biopsy was positive for lymphoma. The patient began her first cycle of cyclophosphamide, doxorubicin, vincristine, and prednisone (CHOP) on 20 February 1998. The dose of Vincristine using a standard based on 1.4 mg/m^2 was capped at 2.0 mg. A second cycle of CHOP was administered on 13 March 1998. On 24 March 1998 she complained of numbness and tingling of her fingers as well as dyspnea on exertion. A diagnosis of vincristine neuropathy was entertained to explain the peripheral neuropathic symptoms, but the etiology of her dyspnea remained unclear. She underwent bilateral lower extremity Doppler studies, a repeat muga scan, and a chest roentgenograph, all of which were negative. Pulse oximetry was performed, with and without exertion, and her oxygen saturation in both modes was 96% on room air. On 2 April 1998, she first noted a "weak voice" and on that day received cycle three of chemotherapy without vincristine. A pulmonary consultation was requested. On 3 April 1998, the patient underwent pulmonary function testing which revealed

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normal lung volumes, normal diffusing capacity, but a marked narrowing of the inspiratory limb of the flow/volume loop. This suggested a variable extrathoracic obstruction. On 17 April 1998, the patient underwent fiberoptic bronchoscopy, which showed bilateral vocal cord paralysis. The patient then went on to complete three additional cycles of chemotherapy, substituting VP-16 for vincristine. The neurological symptoms of numbness and tingling in her fingers and toes slowly improved over the next three months. The wheezing, shortness of breath, and "weak voice" dissipated over the next six weeks. A repeat set of pulmonary function studies eight weeks later showed no significant change in the original abnormality. Within three months of her presenting toxic symptoms, she was clinically free of vincristine-related complications.

Review of the Literature

Since 1963, there have been 25 reported cases of vincristine-induced vocal cord paralysis.[1–8] In three cases, the dose of vincristine was not stated. Of the remaining 22 cases, 18 patients received doses of vincristine well in excess of 2.0 mg.[6–8] In the remaining four cases, the doses of vincristine were less than or equal to 2.0 mg and only one of these patients suffered *bilateral* vocal cord paralysis.[7] In all the case reports, withdrawal of the offending agent resulted in resolution of symptoms over several weeks, except in one case where the patient expired secondary to aspiration.[1] It should be noted that in only one case was vincristine discontinued for two cycles after diagnosis of vocal cord paralysis, and then restarted with a 50% dose reduction.[6] This patient apparently tolerated retreatment with vincristine well.

The currently accepted dose of vincristine in modern use is 1.4 mg/m^2 in adults and 2.0 mg/m^2 in children.[10,12] Although it is commonplace to currently cap the dose of vincristine at 2.0 mg, this is largely empiric and remains controversial, particularly with the MOPP regimen.[9,11] There have been only two prior cases of adult vincristine-associated vocal cord paralysis reported in the English literature using the 1.4mg/m^2 dose of this agent capped at 2.0 mg.[4,7] To this we add a third case, which represents only the second patient who experienced bilateral vocal cord paralysis due to vincristine. It is clear that this is a rarely seen toxic effect of vincristine at these doses. Fortunately, this condition reverses completely with cessation of therapy. Whether the patient can be rechallenged using a dose reduction scale has not been established. We conclude that a complaint of hoarseness should raise the question of early vincristine-associated vocal cord paralysis. Laryngoscopy may be required in the evaluation of such a patient. Prompt discontinuation of vincristine is essential for prompt recovery and avoidance of more serious respiratory compromise.

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Cytomegalovirus Pneumonitis as an Initial Presentation in an HIV-Infected Patient

GARY G. ZHAO, M.D., JIA YI LI, M.D., ERNEST ATLAS, M.D.,
AND JOSEPH P. CLEARY, M.D.

ABSTRACT—Human immunodeficiency (HIV) infection often presents with an unusual symptom complex. Although cytomegalovirus (CMV) is a frequent opportunistic infection in the late stage of acquired immunodeficiency syndrome (AIDS), CMV pneumonitis as an initial manifestation of HIV infection is not documented in the medical literature. We report a previously healthy patient with bilateral interstitial pulmonary infiltrates who was found to have CMV pneumonitis; only later was HIV virus infection diagnosed. Cytomegalovirus is a frequently isolated pathogen from respiratory secretions in AIDS patients. The role of CMV as a sole pulmonary pathogen is controversial. After exclusion of other pathogens, CMV was demonstrated by histological changes and viral culture in our case. This case indicates that pulmonary infiltrates presenting as the first manifestation of HIV infection can be caused by CMV infection.

PULMONARY infection is very common in persons with human immunodeficiency virus (HIV) infection. Cytomegalovirus (CMV) is a frequently isolated pathogen from respiratory secretions in acquired immunodeficiency syndrome (AIDS) patients. CMV pneumonitis often presents with fever, dyspnea, nonproductive cough, and hypoxia. Diagnosis of CMV pneumonitis is based not solely on histological changes and viral culture, but also exclusion of other pulmonary pathogens. CMV pneumonitis as an initial presentation of HIV infection has not been reported in the current medical literature. We describe here a previously healthy patient with bilateral interstitial lung infiltrates who was found to have CMV pneumonitis; then HIV infection was detected.

Case.—A previously healthy 48-year-old Caucasian man without significant past medical history presented to the emergency room with progressive shortness of breath and a productive cough for two and a half weeks. He also experienced fatigue, malaise, anorexia, and weight loss of 30 pounds. He denied having fever, diarrhea, hemoptysis, chest pain, vision changes, and tuberculosis (TB) exposure. HIV test was reported negative a year ago. He was an unmarried carpenter who had visited Thailand for "business" every two years for the past 10 years. He denied heterosexual and homosexual experiences in Thailand. He had no intravenous drug abuse and blood transfusion in the past.

On initial examination, he was afebrile with a respiratory rate of 24 beats per minute. Resting pulse oxymetry was 100% on room air. He appeared pale, malnourished, but in no acute distress. He had no oral thrush, skin rashes, and an unremarkable fundoscopic exam. There were scattered rales over the upper two-thirds of the lung fields bilaterally. Heart, abdominal, and neurological examinations were unremarkable. Laboratory data included a WBC count of 4,900 cells/mm^3, neutrophil count of 88.8% with a left shift, hemoglobin (Hb) of 9.5 g/dL, platelet

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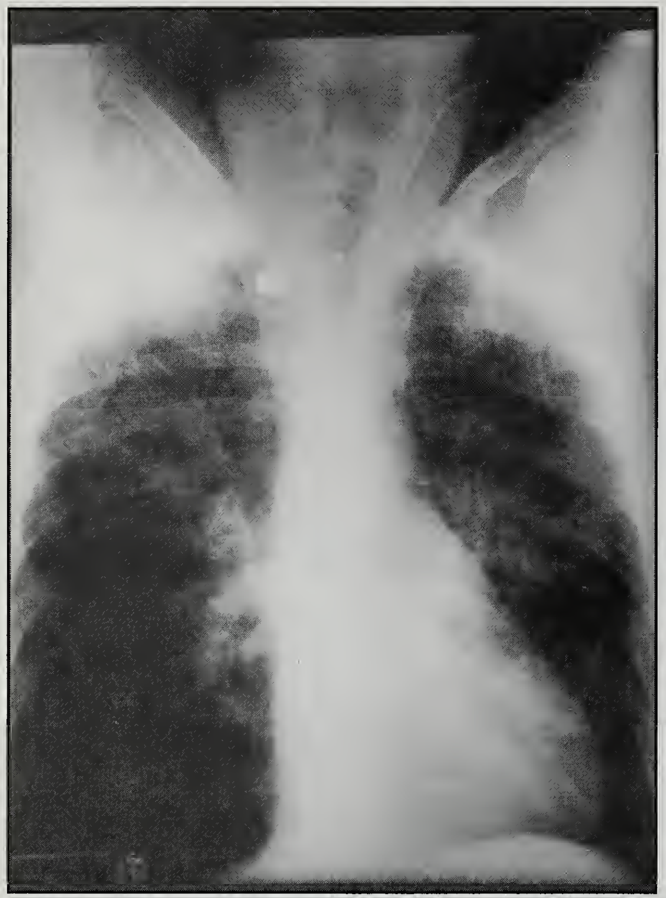

Figure 1.—Chest radiograph on admission. It showed bilateral reticular pulmonary infiltrates which predominantly involve the upper lobes. These infiltrates were not present in the previous chest film.

count of 120,000/mm^3, and serum albumin of 3.3 g/dL. Chest radiograph (Fig. 1) showed bilateral interstitial infiltrates which were mainly limited to the upper two-thirds of both lung fields.

The patient was placed on respiratory isolation and treated with four anti-TB medications (isoniazid, rifampin, ethambutol, and pyrazinamide) because of suspicion of pulmonary TB. He had three sputums staining negative for acid fast bacillus (AFB) and a negative purified protein derivative (PPD) skin test. He was not anergic. On day three, he underwent a bronchoalveolar lavage (BAL) which was negative for AFB, *Pneumocystis carinii*, bacteria, and fungi. His symptoms were not improved, he became febrile on day four. Respiratory isolation and anti-TB medications were discontinued on day five. On the same day, he had a transbronchial biopsy (TBB) which indicated reactive atypia showing probable viral cytopathic effect. Later on, CMV serology was positive for anti-CMV Ig M and Ig G antibodies. On day nine, open lung biopsy was performed and showed positive immunohistochemical stains for CMV and the cytopathologic changes which were consistent with CMV infection (Fig. 2). Special stains for AFB, fungi, and PCP were negative. Culture from open lung biopsy specimens grew CMV. CMV pneumonitis was confirmed and anti-CMV therapy with foscarnet (60 mg/kg, IV Q8h) was administered. His HIV test was positive. CD4 cell count was 33/mm^3, and the viral load was >750,000 copies/mL. The patient was started on triple antiretroviral therapy with retrovir, epivir, and crixivan. His condition improved, and he became afebrile 12 days after foscarnet therapy. He was discharged to extended care facility with intravenous foscarnet therapy.

Discussion

Cytomegalovirus is a ubiquitous human herpesvirus that causes latent infection in immunocompetent hosts. It can reactivate and lead to pneumonitis, retinitis, encephalitis, gastroenteritis, and adrenalitis under immunocompromised conditions such as AIDS and bone marrow transplantation.[1,2] Seroprevalance of CMV ranges from 40% to 100 %.[3] Those CMV-seropositive patients with low CD4 counts (<50/μL) are at highest risk of CMV diseases. CMV diseases have been recognized in up to 40% of patients with advanced HIV infection.[4,5] They contribute indirectly and directly to morbidity and mortality among AIDS patients.[6] Studies show that coinfection with CMV accelerates progression of AIDS. A number of mechanisms have been proposed for interaction between the two viruses.[7,8] CMV may potentiate immunomodulation induced by HIV, enhance replication of HIV viruses by transactivation of HIV genome at the molecular level, and facilitate the entry of HIV viruses into the cells.

Pulmonary infection is a major source of morbidity and mortality in HIV-infected patients.[9] It includes bacterial, viral, pneumocystis, mycobacterial, and fungal etiologies. Differential diagnosis and early intervention are challenging in the management of HIV infection. CMV pneumonitis is a frequent opportunistic infection in the patients with advanced HIV-infection. Since CMV is ubiquitous in nature, isolation of CMV from respiratory secretions by BAL is not sufficient to establish the diagnosis of CMV pneumonitis. CMV is frequently isolated from respiratory secretions of HIV-infected patients.[2,10] It often coexists with other pulmonary pathogens (ie, bacteria, fungi, pneumocystis carinii, and etc.) in these patients. There are no clinical findings specific to CMV pneumonitis. The diagnosis of pneumonitis due to CMV infection in HIV-infected patients is often difficult. Waxman et al described their experience with nine HIV patients with CMV pneumonitis in a recent publication.[11] The definitive diagnosis of CMV pneumonitis in HIV-infected patients requires demonstration of positive CMV culture from biopsy specimens, the typical histologic features on lung biopsy, or the use of monoclonal antibodies to detect CMV immediate early antigen in BAL-cytology specimens and the absence

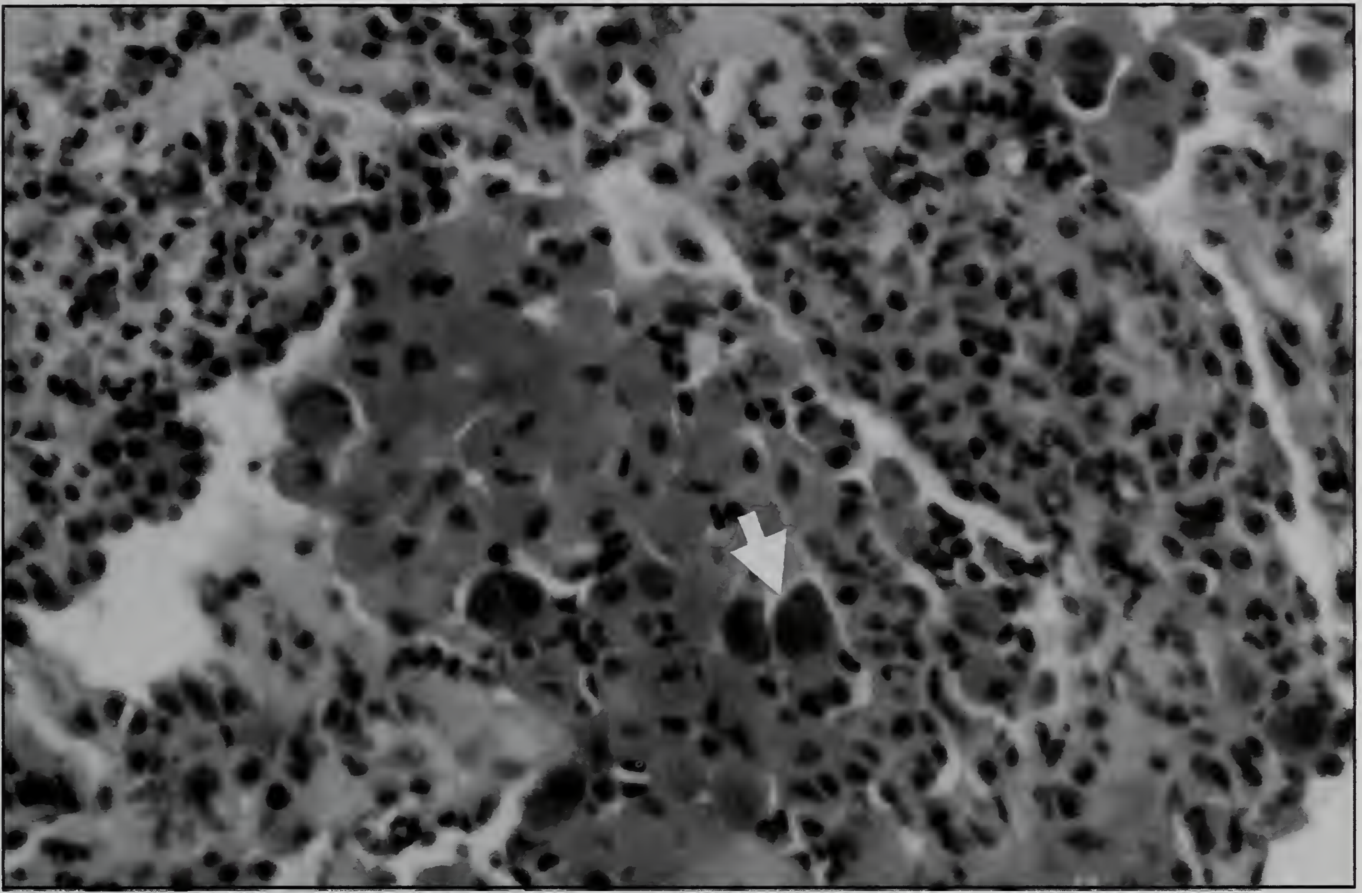

Figure 2.—Histologic specimen obtained from open lung biopsy. It showed a few enlarged alveolar histiocytes which contain large eosinophilic bodies suggestive of viral inclusion (pointed by an arrow; hematoxylin and eosin, original magnification x 400). They are positive for CMV by immunohistochemical stains (not shown here).

of other pulmonary pathogens. The case we report meets all criteria above for the diagnosis of CMV pneumonitis. More recently, polymerase chain reaction (PCR) was used to detect CMV in respiratory secretions from BAL. It provides a sensitive and faster diagnostic method as compared to viral culture.[12,13]

Therapy with standard induction doses of IV ganciclovir or IV foscarnet is recommended for CMV pneumonitis.[14] The duration of therapy is at least 21 days. Evidence favoring maintenance or suppressive therapy with oral ganciclovir has not been established. Long-term maintenance therapy is not recommended in the absence of retinitis or other active CMV diseases, but only for patients with evidence of recurrent CMV pneumonitis. Prophylaxis with oral ganciclovir has been recommended in HIV-infected patients who are CMV-seropositive and have a CD4 count lower than $50/\mu L$.[15] Financial issues must be considered before initiation of prophylactic treatment.

This case report describes CMV pneumonitis as the first manifestation of HIV infection. It should be included in the differential diagnosis of pulmonary infiltrates in suspected immunocompromised patients. Early recognition of this disease is important in the management of HIV infection.

Acknowledgment

We express our gratitude to Saraswathi Nair, M.D. and Raymond Schneider, M.H.S., P.A. for their assistance in photographing and interpreting pathological data, and many other physicians who helped care for this patient.

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Lyme Disease: Disparity Between Culture and Polymerase Chain Reaction Detection of *Borrelia burgdorferi* After Exposure to Ceftriaxone *In Vitro*

SHOBHA VARDE, M.S., GARY P. WORMSER, M.D., JOHN NOWAKOWSKI, M.D.,
ROBERT B. NADELMAN, M.D., SUSAN BITTKER, M.S., DENISE COOPER, M.S.,
AND IRA SCHWARTZ, PH.D.

ABSTRACT—Polymerase chain reaction is often used for detection of *Borrelia burgdorferi* in biological specimens. It has been suggested that polymerase chain reaction may be used as a surrogate marker of cell viability. To test this premise, *B. burgdorferi* cultures were treated with the antibiotic, ceftriaxone, and aliquots were cultured for cell viability and tested by polymerase chain reaction. Ceftriaxone treatment abrogated the ability to subculture *B. burgdorferi* by three days post-treatment. In contrast, positive polymerase chain reaction results were obtained for up to 56 days after antibiotic treatment. These findings indicate that positive polymerase chain reaction results do not provide proof of bacterial cell viability *in vitro*.

LYME disease, the most common vector-borne disease in the United States, is caused by infection with *B. burgdorferi* .[1,2] Routine laboratory diagnosis is generally accomplished by serology although such tests are often negative during acute disease.[3] Culture of an etiologic agent is generally considered the gold standard for laboratory confirmation of an infectious disease; however, culture yields of *B. burgdorferi* from clinical material other than blood and skin lesions are low.[4,5] As a result, numerous polymerase chain reaction (PCR)-based protocols have been developed to aid in the diagnosis of Lyme disease.[6] Indeed, it has been suggested that positive PCR findings may serve as a surrogate for active infection with *B. burgdorferi* in tissues with low culture yields (eg, synovial fluid).[7]

A positive PCR signal may result from amplification of template DNA regardless of the viability of the organism being tested for, and, therefore, a positive PCR result may not equate with active infection. To investigate this issue further and to establish a correlation between PCR positivity and culturability of *B. burgdorferi*, a systematic investigation of cell viability and PCR status was undertaken in ceftriaxone treated cultures of *B. burgdorferi.*

Materials and Methods

Two *B. burgdorferi* sensu stricto isolates, B31 (the type strain) and B225 (a patient skin lesion isolate) were inoculated in 250 mL of BSKII medium supplemented with 6% rabbit serum (two flasks per isolate) and grown at 33°–34°C for three days.[4] After three days of culture, ceftriaxone (Roche Pharmaceuticals, Nutley, New Jersey) was added to one of the duplicate flasks to a final concentration of 10 μg/mL. This time point is considered day zero (Table 1). Duplicate 0.5 mL aliquots were removed at this time and subsequently on days three, seven, 14, 28, 56, and 112. One aliquot was subcultured into 6 mL of BSKII medium and monitored for *B. burgdorferi* growth over a 12-week period of incubation at 33°–34°C. Bacterial growth was detected based on visualization of a characteristic color change in the media from red to

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Table1.—Detection of *B. burgdorferi* by Culture or PCR After Treatment with Ceftriaxone.*

	Ceftriaxone treated cultures				**Untreated cultures**			
Sampling day	**B 31**		**B225**		**B 31**		**B 225**	
	Culture	**PCR**	**Culture**	**PCR**	**Culture**	**PCR**	**Culture**	**PCR**
0	+	+	+	+	+	+	+	+
3	–	+	–	+	+	+	+	+
7	–	+	–	+	+	+	+	+
14	–	+	–	+	–	+	+	+
28	–	+	–	+	–	+	+	+
56	–	+	–	+	–	+	–	+
112	–	–	–	–	–	–	–	–

*On the indicated sampling day, 0.5 mL aliquots of ceftriaxone-treated or untreated culture were inoculated into 6 mL of fresh BSKII medium and growth of *B. burgdorferi* was monitored as described in the text. A duplicate aliquot was tested for the presence of *B. burgdorferi* DNA by PCR. +, growth or positive PCR; – , no growth or negative PCR.

yellow, with the presence of viable spirochetes confirmed by fluorescent microscopy using methods previously described.[5] Regardless of color change in the media, all subcultures were examined by fluorescent microscopy at two and 12 weeks.

DNA was extracted from 100 mL portions of a duplicate culture aliquot by means of the IsoQuick Nucleic Acid Extraction kit (Orca Research Inc.) as previously described.[8] PCR detection of *B. burgdorferi*—specific DNA was performed as described earlier using a primer set (IS1/IS2) targeting the species-specific 23S rRNA gene duplication.[4] PCR products were electrophoresed on 1% agarose gels and visualized with ethidium bromide. DNA was transferred overnight onto nylon membranes and probed with a digoxigenin labeled complementary oligonucleotide.

Results and Discussion

The results of culture and PCR are summarized in Table 1. As expected, treatment with ceftriaxone resulted in bacterial cell death as demonstrated by the inability to subculture *B. burgdorferi* as early as three days post-administration. Absence of growth was observed after 14 to 28 days even in the absence of antibiotic treatment; this is most likely due to exhaustion of nutrients in the media on long-term growth. In contrast to the cell growth measurements, *B. burgdorferi* DNA was detected by PCR in the treated cultures for up to 56 days, long after cell viability had been abrogated. Indeed, although subculture clearly differentiated ceftriaxone-treated from untreated cultures, no such distinction was discernible by PCR. Interestingly, a disparity between PCR and culture was even observed in untreated cultures. This suggests that bacterial DNA persists (as measured by positive PCR results) regardless of the mechanism of cell killing.

A number of previous studies with experimentally infected animals have demonstrated that *B. burgdorferi* can be readily cultivated from a variety of tissues 9–12. Furthermore, treatment with ceftriaxone effectively eliminates infection, since viable organisms can no longer be cultured.[13,14] It has been suggested that PCR could be used as a surrogate for culture.[7,15] Based on the present study, however, this assumption may only be appropriate for negative PCR findings. A PCR negative result may be taken as an indication of the absence of organism. However, a positive PCR signal is not indicative of viable cells since DNA may persist in the absence of live organism. Thus, a PCR positive signal after appropriate antibiotic treatment, in the absence of a positive culture, must be interpreted with caution.

Acknowledgements

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Medical Policy

CPAP Coverage Criteria
Supplier Notice 98-41

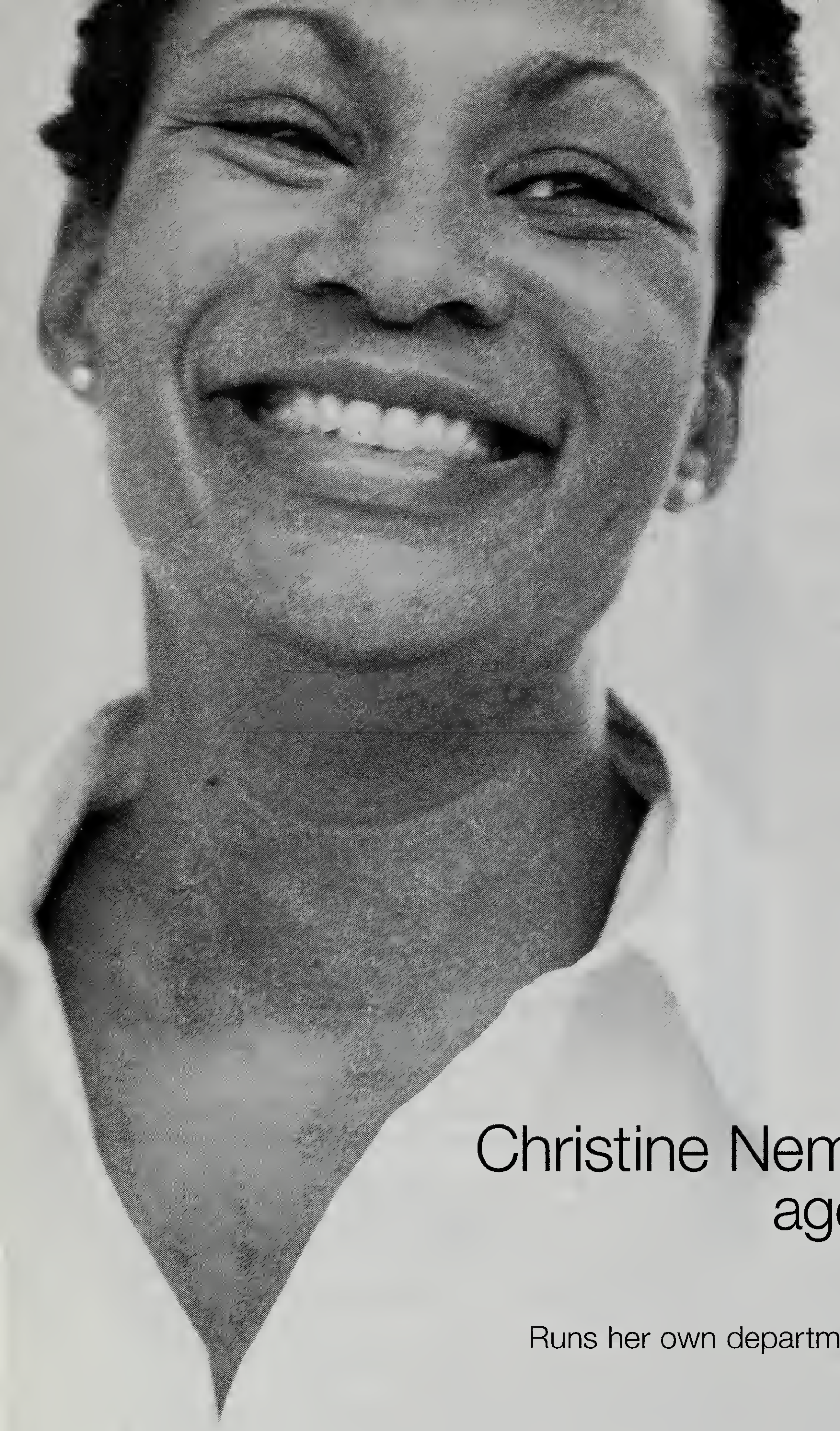
December 18, 1998

The Region A DMERC has received numerous inquiries regarding coverage criteria for Continuous Passive Airway Pressure Systems (CPAPs).

The CPAP Policy states: "CPAP is covered for patients with a diagnosis of obstructive sleep apnea with documentation of at least 30 episodes of *apnea*, each lasting a minimum of 10 seconds, during six to seven hours of recorded sleep. CPAP is covered when used in all adult patients with moderate or severe obstructive sleep apnea, as defined above, for whom surgery is a likely alternative to CPAP."

Reimbursement for CPAP is limited to patients with a diagnosis of obstructive sleep apnea, documented by episodes of apnea. Documented episodes of hypopnea *do not* meet coverage criteria for CPAP. Episodes of hypopnea *should not* be reported in question #12 of DMERC CMN 03.02 for CPAP.

Also, accessories used with CPAP can be billed separately with the NU modifier. If the CPAP and accessories are billed simultaneously and the CPAP is denied, the accessories will also be denied. Furthermore, if the CPAP accessories are billed alone with no record of CPAP in the patient's history, or a denied CPAP in its history, the accessories will be denied.



Christine Nemeth
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SLS 833

MORBIDITY AND MORTALITY WEEKLY REPORT

Decline in Deaths from Heart Disease and Stroke—United States, 1900–1999

HEART disease has been the leading cause of death in the United States since 1921, and stroke has been the third leading cause since 1938[1]; together they account for approximately 40% of all deaths. Since 1950, age-adjusted death rates from cardiovascular disease (CVD) have declined 60%, representing one of the most important public health achievements of the 20th century. This report summarizes the temporal trends in CVD, advances in the understanding of risk factors for CVD, development of prevention interventions to reduce these risks, and improvements in therapy for persons who develop CVD.

Decline in CVD Death Rates.—Age-adjusted death rates per 100,000 persons (standardized to the 1940 U.S. population) for diseases of the heart (ie, coronary heart disease, hypertensive heart disease, and rheumatic heart disease) have decreased from a peak of 307.4 in 1950 to 134.6 in 1996, an overall decline of 56%[1] (Fig. 1). Age-adjusted death rates for coronary heart disease (the major form of CVD contributing to mortality) continued to increase into the 1960s, then declined. In 1996, 621,000 fewer deaths occurred from coronary heart disease than would have been expected had the rate remained at its 1963 peak.[1]

Age-adjusted death rates for stroke have declined steadily since the beginning of the century. Since 1950, stroke rates have declined 70%, from 88.8 in 1950 to 26.5 in 1996. Total age-adjusted CVD death rates have declined 60% since 1950 and accounted for approximately 73% of the decline in all causes of deaths during the same period.[1]

Disease Epidemiology.—Intensive investigation into the CVD epidemic largely began in the 1940s following World War II, although causal hypotheses about CVD and recognition of geographic differences in disease rates occurred earlier.[2–4] Landmark epidemiologic investigations, including the cross-country comparisons of Ancel Keys[5] (see box) and the Framingham Heart Study,[6] established the major risk factors of high blood cholesterol, high blood pressure, and smoking and dietary factors (particularly dietary cholesterol, fat, and sodium). The risk factor concept—that particular biologic, lifestyle, and social conditions were associated with increased risk for disease—developed out of CVD epidemiology.[3–4] In addition to the major risk factors (ie, high blood pressure, high blood cholesterol, and smoking), other important factors include socioeconomic status, obesity, and physical inactivity.[7] Striking regional differences were noted particularly for stroke mortality, with the highest rates observed in the southeastern United States.[1] Cross-national and cross-cultural studies highlighted the importance of social, cultural, and environmental factors in the development of CVD.

Coronary heart disease and stroke, the two major causes of CVD-related mortality, are not influenced to the same degree by the recognized risk factors. For example, elevated blood cholesterol is a major risk factor for coronary heart disease, and hypertension is the major risk factor for stroke. Physical activity, smoking cessation, and a healthy diet, which can lower the risk for heart disease, also can help lower the risk for stroke.[8]

Advances in Prevention.—Early intervention studies in the 1960s sought to establish whether lowering risk factor levels would reduce risk for CVD.[2–4] During the 1970s and 1980s, along with numerous clinical trials demonstrating the efficacy of antihypertensive and lipidlowering drugs, community trials sought to reduce risk at the community level. Public health interventions to reduce CVD have benefitted from a combination of the "high risk" approach—aimed at persons with increased risk for CVD—and the population-wide approach—aimed at lowering risk for the entire community.[10] National programs that combine these complementary approaches and that are aimed at health-care providers, patients, and the general public includethe National High Blood Pressure Education Program,[11] initiated in 1972, and the National Cholesterol Education Program, initiated in 1985.[12] Although earlier CDC community demonstration projects focused on cardiovascular health,[9] CDC established its National Center for Chronic Disease Prevention and Health Promotion in 1989, with a high priority of promoting cardiovascular health.

Reprinted from the *Morbidity and Mortality Weekly Report*, 6 August 1999; vol. 48, no. 30, Centers for Disease Control (CDC), National Institute for Health (NIH).

Ancel Keys, Ph.D.

In addition to his role in establishing modern cardiovascular disease (CVD) epidemiology, Ancel Keys (born on January 26, 1904) is closely associated with two famous "diets," one loathed by soldiers and the other beloved by health-conscious and taste-conscious diners. As an advisor to the U.S. Department of Defense during World War II, he formulated balanced meals for combat soldiers that became known as K rations. Later, Keys and his wife, Margaret, popularized the Mediterranean diet with a series of best-selling books. Science, diet, and health have been central themes of his professional and private lives.

Keys attended the University of California, Berkeley, where he received a B.A. in economics and political science (1925), an M.S. in biology (1929), and a Ph.D. in oceanography and biology (1930). He earned a second Ph.D. in physiology at Cambridge in 1938. In 1936, he became a professor at the University of Minnesota where he established the Laboratory of Physiological Hygiene. Keys directed the laboratory from 1939 until his retirement in 1975.

During World War II, Keys studied starvation and subsistence diets, eventually producing his two-volume *Biology of Human Starvation* (1950). His interest in diet and CVD was prompted, in part, by seemingly counterintuitive data: American business executives, presumably among the best-fed persons, had high rates of heart disease, while in post-war Europe, CVD rates had decreased sharply in the wake of reduced food supplies. Keys postulated a correlation between cholesterol levels and CVD and initiated a study of Minnesota businessmen (the first prospective study of CVD),[1] culminating in what came to be known as the Seven Countries Study.[2] These studies found strong associations between the CVD rate of a population and average serum cholesterol and per capita intake of saturated fatty acids.

From the early 1950s, Keys actively promoted his findings to an increasingly health conscious public. The resulting "cholesterol controversy" revealed sharp divisions in post-war scientific culture over whether the statisticians' "strong associations" could provide scientific certainty. This controversy left greater opportunity for competing food industry groups, health promotion associations, food faddists, physicians, and insurance companies to use the ambiguities and methodologic quibbles inherent in such studies to pursue their own agendas. In its simplest form, the debate over dietary fat and CVD pitted "interventionists" against those calling for further studies—preferably clinical or laboratory studies.

Keys always has been considered an interventionist. He generally has shunned food fads and vigorously promotes the benefits of "reasonably low-fat diets," instead of following the North American habit for making the stomach the garbage disposal unit for a long list of harmful foods." Keys' studies and recommendations have had a substantial impact on changes in the U.S. diet and the resulting downward trend in CVD.

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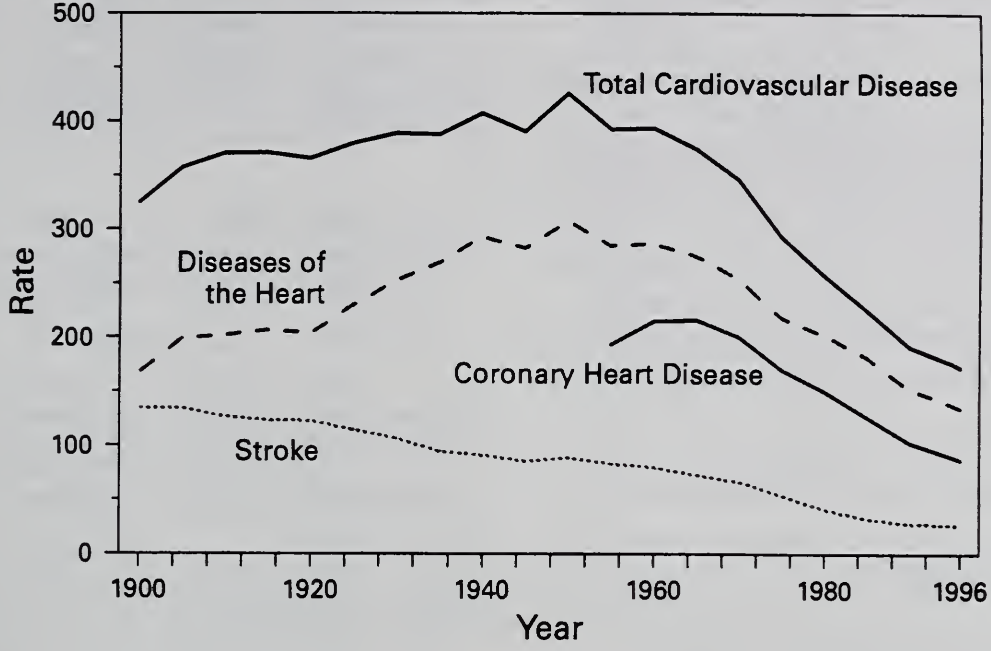
Factors Contributing to the Decline in CVD Deaths.— Reasons for the declines in heart disease and stroke may vary by period and across region or socioeconomic groups (eg, age, sex, and racial/ethnic groups). Prevention efforts and improvements in early detection, treatment, and care have resulted in a number of beneficial trends (Table 1), which may have contributed to declines in heart disease and stroke. These trends include

- a decline in cigarette smoking among adults aged ≥18 years from approximately 42% in 1965 to 25% in 1995.[13] Substantial public health efforts to reduce tobacco use began soon after recognition of the association between smoking and CVD and between smoking and cancer and the first Surgeon General's report on smoking and health published in 1964.
- a decrease in mean blood pressure levels in the U.S. population.[11,13,14]
- an increase in the percentage of persons with hypertension who have the condition treated and controlled. [11,13,14]
- a decrease in mean blood cholesterol levels.[12–14]
- changes in the U.S. diet. Data based on surveys of

Figure 1.—Age-adjusted death rates* for total cardiovascular disease, diseases of the heart, coronary heart disease, and stroke,[†] by year—United States, 1900–1996.



*Per 100,000 population, standardized to the 1940 U.S. population.

†Diseases are classified according to *International Classification of Diseases* (ICD) codes in use when the deaths were reported. ICD classification revisions occurred in 1910, 1921, 1930, 1939, 1949, 1958, 1968, and 1979. Death rates before 1933 do not include all states. Comparability ratios were applied to rates for 1970 and 1975.

Source: Adapted from reference 1; data provided by the National Heart, Lung and Blood Institute, National Institutes of Health.

food supply suggest that consumption of saturated fat and cholesterol has decreased since 1909.[15] Data from the National Health and Nutrition Examination surveys suggest that decreases in the percentage of calories from dietary fat and the levels of dietary cholesterol coincide with decreases in blood cholesterol levels.[16]

- improvements in medical care, including advances in diagnosing and treating heart disease and stroke, development of effective medications for treatment of hypertension and hypercholesterolemia, greater numbers of specialists and health-care providers focusing on CVD, an increase in emergency medical services for heart attack and stroke, and an increase in coronary-care units.[13,17] These developments have contributed to lower case-fatality rates, lengthened survival times, and shorter hospital stays for persons with CVD.[1,17]

Challenges for the 21st Century

Despite remarkable progress, heart disease and stroke remain leading causes of disability and death. Estimated costs for morbidity and mortality from CVD, including health expenditures and lost productivity, are expected to be $286.5 billion in 1999.[18] In addition, the overall declines in heart disease and stroke mortality mask important differences in rates of decline by race/ethnicity, sex, socioeconomic status and geographic region. During 1985–1996, for example, heart disease age-adjusted mortality declined 29% among white men, but only 10% among American Indian/ Alaskan Native women.[13] Persons of lower socioeconomic status have higher mortality, morbidity, and risk factor levels for heart disease and stroke than persons of higher socioeconomic status.[13,19] In addition, the social class gap in heart disease deaths may be increasing as the rates of heart disease decline faster among higher social classes.[19] Geographically, declines in heart disease deaths did not occur at the same time for all communities. Areas with poorer socioeconomic profiles were more likely to experience a later onset of the decline of heart disease.[19]

Public health programs at the state level for heart disease and stroke have been limited. In fiscal year 1999, through a new program, CDC funded 11 states with the highest CVD mortality rates to plan, develop, and implement state-based efforts for CVD prevention. In addition

Table 1.—Estimated change in risk factors and correlates for heart disease and stroke, by selected characteristics—United States

Characteristic	Baseline year	Baseline estimate	Follow-up year	Follow-up estimate
Adults aged 20–74 years with hypertension[*†]	1976–1980	37%	1988–1994	23%
Persons with hypertension who are taking action to control their blood pressure (eg, medication, diet, reducing salt intake, and exercise)	1985	79%	1990	90%
Persons with hypertension whose blood pressure is controlled	1976–1980	11%	1988–1991	29%
Adults aged 20–74 years with high blood cholesterol[†§]	1960–1962	32%	1988–1994	19%
Mean serum cholesterol levels mg/de of adults aged ≥18 years[†]	1960–1962	220	1988–1994	203
Adults aged ≥18 years who are current smokers[†]	1965	42%	1995	25%
Persons who are overweight[†¶]	1960–1962	24%	1988–1994	35%
Percentage of calories in the diet from fat[‡]	1976–1980	36%	1988–1994	34%
Percentage of calories in the diet from saturated fat[‡]	1976–1980	32%	1988–1994	12%
Number of physicians indicating cardiovascular diseases as their primary area of practice	1975	5,046	1996	14,304

*Systolic pressure ≥140 mm Hg, diastolic pressure ≥90 mm Hg, or taking antihypertensive medication.
†Estimate is age-adjusted to the 1940 U.S. population.
§Serum cholesterol level ≥240 mg/de (6.2 mmol/L).
¶Defined as a body mass index 27.8 kg/m^2 among men and 27.2 kg/m^2 among women.
‡Based on 1-day dietary recall.
Source: References 11-14.

to activities such as surveillance, these programs will emphasize policy and environmental interventions, both social and physical, aimed at sustaining positive health behavior change.

Although many trends have been positive, trends for some important indicators have not improved substantially, have leveled off, or are reversing. For example, approximately 70% of persons with hypertension do not have the condition controlled at levels below 140/90 mm Hg, and death rates for stroke have not declined in recent years.[1,11,13] Heart failure has emerged as a health concern for older adults,[20] and adults who survive a myocardial infarction or other hypertension-related diseases remain at increased risk for heart failure. In addition, the prevalence of obesity has increased among both children and adults in the United States.[13]

Major public health challenges for the 21st century include

- reducing risk factor levels and preventing the development of adverse risk factors. Continued research is needed to understand the determinants (social, psychological, environmental, physiologic, and genetic) of CVD risk factors.
- reducing the racial/ethnic disparities in heart disease and stroke mortality.
- increasing the ability to reach underserved groups with appropriate and effective public health messages.
- promoting policy and environmental strategies that enhance healthy behavior.
- determining the relation between genetics and disease. The associations of genetic variants with CVD, and especially the interplay between genetic and environmental factors, may play increasingly important roles in the nation's efforts to prevent CVD.
- identifying new or emerging risk factors and determining their potential for public health intervention. New or emerging risk factors that have been associated with CVD include elevated levels of total homocyst(e)ine, fibrinogen, and C-reactive protein, and infectious agents such as *Helicobacter pylori* and *Chlamydia pneumoniae.*
- focusing on secondary prevention and disability. An aging U.S. population and an increasing number of persons surviving life-threatening cardiovascular conditions requires public health programs to focus on issues such as disability and quality of life. Persons with existing cardiovascular conditions are at increased risk for future life-threatening events related to those conditions.

- addressing the needs of the global community. Although CVD death rates are higher in developed nations, most cases occur in developing nations.[8] Developing countries may face a double burden of infectious and chronic diseases. International collaboration to improve cardiovascular health[9] will need to continue to reduce the burden of CVD worldwide.

Reported by: Cardiovascular Health Branch Division of Adult and Community Health, National Center for Chronic Disease Prevention and Health Promotion, CDC.

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Medical Policy

Delivery of DMEPOS Items Prior to Hospital Admission

DMEPOS items that will be used initially in the hospital should not be delivered to a patient prior to the hospital admission. These items should not be billed to the DMERC. Any item initially used in the hospital is considered included in Medicare's payment to the hospital. The supplier must seek reimbursement for the item from the hospital. This would be true even if the item is custom fabricated—eg, a brace that is applied after spinal surgery, etc.

Those items delivered to a patient in the hospital up to two days before discharge to home, for purposes of fitting or training of the patient on its use in the home, may be billed to the DMERC. (Refer to article "Delivery of DMEPOS Items prior to Discharge" in Region A, DMERC Medicare News, December 1998, page 4.)

Outbreak of *Escherichia coli* 0157:H7 and *Campylobacter* Among Attendees of the Washington County Fair —New York, 1999

ON September 3, 1999, the New York State Department of Health (NYSDOH) received reports of at least 10 children hospitalized with bloody diarrhea or *Escherichia coli* 0157:H7 infection in counties near Albany, New York. All of the children had attended the Washington County Fair, which was held August 23–29, 1999; approximately 108,000 persons attended the fair during that week. Subsequently, fair attendees infected with *Campylobacter jejuni* also were identified. An ongoing investigation includes heightened case-finding efforts, epidemiologic and laboratory studies, and an environmental investigation of the Washington County fairgrounds. This report presents the preliminary findings implicating contaminated well water.

To identify additional fair attendees with diarrhea, the NYSDOH issued press releases, conducted daily press briefings, and contacted emergency departments, laboratories, and infection-control practitioners by fax and telephone. Laboratories were asked to culture all diarrheal stool specimens for *E. coli* 0157:H7 and subsequently for *Campylobacter* spp.

As of September 15,921 persons reported diarrhea after attending the Washington County Fair. Stool cultures yielded *E. coli* 0157:H7 from 116 persons; 13 of these persons were coinfected with *C. jejuni*. Stool cultures from 32 additional persons yielded only Campylobacter. Sixty-five persons have been hospitalized; 11 children have developed hemolytic uremic syndrome (HUS); and two persons died: a 3-year-old girl from HUS and a 79-year-old man from HUS/thrombotic thrombocytopenic purpura. Cases of diarrheal illness among fair attendees have been reported from 14 New York counties and four states.

An environmental investigation of the fairgrounds on September 3 determined that much of the fair was supplied with chlorinated water. However, in at least one area of the fair, a shallow well supplied unchlorinated water to several food vendors who used the water to make beverages and ice. Initial cultures of water from this well yielded high levels of coliforms and *E. coli.*

A case-control study was conducted to determine risk factors for infection. Case-patients were residents of Washington County who developed diarrhea after attending the fair and in whom stool cultures yielded *E. coli* 0157:H7 or *Campylobacter.* Controls were residents of Washington County randomly selected from the telephone directory who had attended the fair and were frequency-matched by age group.

Thirty-two case-patients and 84 controls were enrolled. Analysis was limited to those attending the fair at least once during the final four days of the fair because all ill persons, including those attending only once, attended during that period. Drinking water or beverages made with water from the suspect well was associated with illness. Twenty-six (81%) of 32 case-patients and nine (16%) of 57 controls had consumed water from this well during the final four days of the fair (matched odds ratio=23.3; 95% confidence interval=6.3–86.9). When controlled for water consumption, other exposures, such as eating food at the fair and contact with manure, were not significantly associated with illness.

On September 9, the New York State Public Health Laboratory, the Wadsworth Center, used five different polymerase chain reaction assays to demonstrate the presence of *E. coli* 0157:H7 DNA in water from the implicated well and subsequently isolated the organism from water samples from the well and the water distribution system. Pulsed-field gel electrophoresis testing by the Wadsworth Center showed that the DNA "fingerprints" of *E. coli* 0157:H7 isolates from the well, the water distribution system, and most patients were similar. Water sampling for *Campylobacter* spp. is ongoing.

To prevent secondary transmission of enteric infection, letters were sent to schools and day care centers emphasizing the need to exclude symptomatic children and practice careful handwashing. Letters also were sent to nursing homes and hospitals with recommendations regarding employees and residents with diarrhea. Information to the public about the outbreak also focused on how to prevent secondary infections. On September 13, the state health commissioner issued an order requiring county fairgrounds to use disinfected water when hosting public events; the commissioner also is reviewing laws and regulations applicable to fairs.

Reported by: County health departments in the Capital District; New York state outbreak investigation team; A. Novello, M.D., Commissioner, New York State Department of Health. Foodborne and Diarrheal Diseases Branch, Division of Bacterial and Mycotic Diseases, National Center for Infectious Diseases; and EIS officers, CDC.

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The Economics of Catastrophic Health Insurance

MARK S. LeCLAIR, Ph.D. AND JOSEPH BENTIVEGNA, M.D.

ABSTRACT—Currently over 41 million Americans lack health insurance and would experience severe financial stress if faced with a major illness. Catastrophic health insurance has been proposed as a means of addressing this problem. This study utilizes the *National Medical Expenditures Survey* of 34,400 households to calculate the cost of catastrophic medical coverage under a number of different assumptions. Estimates of the annual cost range from $109.2 billion to $149 billion, depending upon the size of the deductible, and whether a means test is used to determine degree of coverage. Given the current antideficit climate in Washington, an expense of this magnitude cannot simply be added to the Federal budget. Instead, a simple funding proposal is suggested that provides more than adequate resources to finance the program. Specifically, universal catastrophic coverage would provide insurance companies with relief from approximately $175 billion in medical bills, more than enough to fund even the most ambitious of the proposals.

IN coping with the rising health-care costs, the industrialized democracies have generally established single-payer government-funded systems. Canada, Italy, and France—to name a few—all allow citizens to have their medical bills paid by the government. While a private sector exists in these countries, the vast majority of citizens avail themselves of the government-backed health-care system.

The United States is an exception. Health care is still dominated by the private sector, although various programs for the elderly and disabled, such as Medicare, along with Medicaid for the poor, have been established. The profit motive remains paramount. To some, this system represents a failure of the political process to serve the needs of many citizens. Others point out that the free market system has led to a technological revolution in health care that has cured many diseases, and led to a second middle age for senior citizens due to the benefits of joint replacements, cataract surgery, heart bypass surgery, and life-prolonging chronic therapies such as the treatment of hypertension.

While various scenarios have been proposed to address the needs of the more than 40 million people without health insurance,[1] there has been little evaluation of single-payer catastrophic coverage.[2] In an April 1998 piece in *Connecticut Medicine*, Bentivegna proposed establishing a nation-wide program of Catastrophic Health Insurance.[2] Dr. Bentivegna observed that the growing percentage of individuals without insurance is exposing families to potentially ruinous medical expenses. The combination of rising medical costs, growing part-time employment, and the decline of traditional families suggests the problem is likely to worsen in the future. This will result in an even greater number of people facing the financial uncertainties of being uninsured. The Clinton administration sought to deal with this issue through the introduction of a form of National Health Insurance, but resistance to plans of this type remains high.[3–5]

Although universal catastrophic coverage would address the issues raised by Dr. Bentivegna, the cost is likely to be prohibitive unless some additional sources of funding are found. The current antideficit sentiment in Con-

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gress would result in the defeat of any measure that required a significant increase in government spending. One could then propose a more modest measure, such as coverage for those with low to moderate incomes, which would make the proposal less expensive. Alternatively, the cost of catastrophic coverage could be extracted from the savings accruing to the insurance industry from reduced exposure to obligations arising from severe illness.

The analysis that follows will focus on two aspects of catastrophic insurance plans. First, the economic concept of "moral hazard," ie, the appearance of undesirable changes in the behavior of businesses and individuals in the presence of universal insurance, will be discussed. Second, the potential costs of various programs will be estimated, and sources of funding examined to determine if the costs can be covered in a politically feasible way. Ultimately, suggestions will be made as to how to design a program that is feasible, affordable and avoids moral hazard.

Why Coverage has to be "Universal"

One might be tempted, at first, to simply solve the problem by providing catastrophic coverage only to those lacking health insurance. As this represents less than 17% of all families, such a program would be less expensive and easier to administer than universal coverage. Unfortunately, any attempt to provide less than universal coverage will be rapidly undone by "moral hazard"—the presence of catastrophic coverage will result in individuals dropping their insurance coverage and assuming the limited financial exposure of routine medical care. Likewise, corporations might see little need to offer anything other than a basic health plan to workers, knowing that the government will cap off the financial exposure of their employees. The probable result would be a rapid rise in newly uninsured and underinsured families, ultimately leading to the government providing coverage for all.[6]

Estimating the Cost of Catastrophic Coverage

The initial step in determining the cost of coverage is to establish what is meant by a catastrophic medical event. Obviously, for an uninsured low-income family, the cost of nearly any treatment beyond routine care could quickly become "unpayable." The same financial obligation for a middle-income family might represent more of an annoyance than a threat of financial ruin. A medical expense of $5,000, for instance, would represent a five-year obligation for a family with an income of $20,000 per year, if payments were limited to 5% of annual income. The same expense for a family with an income of $50,000 would require payments over only two years (once again, limiting the payments to 5% of income). For purposes of this study, $5,000 will be taken as the initial cut-off point, since the majority of the uninsured are low- to middle-income individuals. This criterion will be relaxed in the latter half of the analysis.

The average medical expenses (by family) will be calculated utilizing the National Medical Expenditure Survey (NMES) released by the Department of Health and Human Services (DHHS) in 1995. This database contains medical expenditure figures on approximately 34,400 households. These averages will then be extrapolated to the U.S. population as a whole to arrive at an estimate for total obligation the government would be assuming by providing universal coverage. Table 1 contains a summary of the data contained in the NMES survey.

Four different scenarios will be examined: universal catastrophic coverage of expenses greater than $5,000, universal coverage of expenses greater than $10,000, coverage for those with incomes of less than $35,000, and sliding scale universal coverage (with higher income families subject to greater exposure). All figures in the analysis are from 1995, since this currently represents the last iteration of the DHHS study. It should be noted that the numbers in Figure 1 are over-estimates, since a percentage of individuals are already covered by programs such as Medicare (12.7% of the population in 1998), Medicaid, as well as innovative programs such as Children's Health Insurance Program CHIPS (various state initiatives that cover children). Although it is not difficult to make adjustments for Medicare/Medicaid recipients, the participation rate in other government programs is hard to measure.

Fig. 1 illustrates the cost of each of the proposals described above. In Case 1, 11.12% of the population would experience an annual expense of $5,000 or more. In 1995, there were 99,627,000 households in the U.S., indicating that 11.1 million families would experience an expense of this magnitude. The government would cover $13,453 out of the $18,453 average cost of medical care as a result of catastrophic coverage, resulting in a total expense of $149.0 billion. Increasing the "deductible" to $25,000 (Case 2) lowers the government's obligation to $58.1 billion. If coverage is limited to those households with incomes below $35,000 (50.9 million families) then the estimated cost falls to $76.2 billion at the original $5000 deductible. Finally, as outlined in Case 4, if liability rises with income, the cost of the program (*vs* Case 1) is reduced only slightly (less than 10%) to $134.6 billion. At least part of these figures represent duplication of services already provided by the federal government. At the very least, all four figures could be reduced by approximately 13% to account for the percentage of the population that currently is covered by medicare (Fig. 1).

All four proposals have short-comings. Both Case 1 and Case 4 are, at first glance, too expensive to be politically feasible. Total Federal expenditures in 1995 were $1,515.7

Table 1.—Distribution of Medical Expenses from NMES Survey, 1995

Category	Number	Percent	Within Group Average
Total Health Expenditures			
> $ 5,000	3,831	11.12%	$18,453
> $10.000	2,002	5.81	28,863
> $15.000	1,298	3.77	37,913
Hospital Expenditures			
> $ 5,000	1,764	5.12%	$19,401
> $10.000	974	2.83	29,423
> $15,000	649	1.88	38,028
Physician Office Services			
> $ 5,000	638	1.85%	$10,928
> $10.000	184	0.53	21,017
> $15,000	82	0.24	32,050

Note: The figures for Hospital and Physician Services are included since they represent the largest categories of spending. They do not, however, sum to total health expenditures since numerous other categories are included in the NMES figures.

billion, indicating that either proposal would raise spending by nearly 10%. Case 2 exposes lower income families to substantial risk, yet reduces overall cost by only 25%. Finally, Case 3 does not fully address the problem of catastrophic medical expenses, as it leaves those with middle- to upper-incomes without coverage. Although most of the uninsured are in lower-income brackets, lack of coverage extends well into what would be considered moderate income families.

Ideally, one would prefer to see a program such as Case 1, Case 2, or Case 4 adopted, due to the universality of coverage. The magnitude of the numbers suggests, however, that some form of innovative funding would be needed to cover the additional cost to the government. Fortunately, the fundamental changes brought about by the presence of catastrophic insurance result in a means of covering the additional expenditures.

Funding Catastrophic Insurance

If catastrophic coverage was made universal, the reduction in insurance premiums would be the most important source of funds available to fund such a proposal. The risk faced by insurance companies would be reduced substantially, since the upper limit on exposure would be lowered. These savings could then be passed on to consumers/ businesses in the form of lower insurance premiums. Table 2 illustrates the potential savings arising from "Case 4," as derived from the figures in Table 2. If we assume a

Table 2.—Insurance Premiums with Catastrophic Insurance

Income Group	Maximum Liability	Savings On Insurance	Number of Families	Total Savings
< 50,000	$ 5,000	$2,257	67.8m	$153.0 billion
50–100K	$10,000	1,852	24.7	45.7
> 100K	$15,000	1,582	7.1	11.2
Total				**$209.9**

The numbers assume a 15% rate of return above pay-outs for the insurance companies.

Case 1.—Cost to government of covering all but $5,000 of each individual family's exposure: (percentage experiencing "event") * Total number of Families * Average expenditure in this class: (11.12%) * 99,627,000 * (18,453–5,000) = 149,039,361,800—Correction for existing Medicare recipients = $130.1 billion.

Case 2.—Covering all but $25,000 of exposure: (2.045%) * (99,627,000) * (53,531–25,000) = $58,128,264,800 —Correction for existing medicare recipients—$50.7 billion.

Case 3.—Covering all but $5,000 for those making less than $35,000: (11.12) * (50,921,000) * (18,453-5,000) = $76,176,471,700—Correction for existing Medicare recipients = $66.5 billion.

Case 4.—Different coverage for different income levels.

Income	Number	Liability	Government Liability (per family)	Government Liability (Total)
< 50,000	67.8	$ 5,000	$13,453	$101.4 billion
50–100	24.7	$10,000	18,863	27.1
> 100K	7.1	$15,000	22,913	6.1
Total				$134.6 billion
		After correction for existing Medicare recipients		$117.5 billion

*These numbers are over-estimates, due to the 43 million Americans who currently do not have coverage. This would reduce the figure by about 17%, which still leaves more than adequate funds available (about $175 billion).

Figure 1

15% mark-up of insurance premiums above pay-outs on claims, we can utilize the NMES results to estimate the cost of insurance in the absence and presence of federal catastrophic coverage. For the lowest income group, a policy that covered basic medical services could be written for $2,257 less than the same policy in the absence of catastrophic insurance. The 67.8 million families in this category would produce combined savings of $153 billion. For the three income categories as a whole, the savings would total nearly $210 billion.* Approximately $135 billion of this would have to be reclaimed (taxed) by the federal government to fund the catastrophic insurance program, possibly as a simple extension of the existing medicare tax. This would leave consumers/businesses with a small net gain, and considerably less risk. In addition to this source of funding, a small amount of revenue could be extracted through a tax on hospital services. Universal coverage would shield hospitals from having to absorb the cost of treating patients who lack insurance. Estimates from the NMES data suggests this figure is not insubstantial, yet is far too small (approximately $1.5 billion) to make a significant dent in the cost of funding universal coverage.

Conclusion

As the number of uninsured continues to rise in the U.S., the costs imposed both on society and on the health-care industry will continue to increase. Although public resistance to "national health insurance" is strong, catastrophic coverage represents a small positive step towards providing some ceiling on the financial exposure of individuals and families arising from long-term illness. Government involvement in the provision of health care is certainly not a new concept, given that Medicare and Medicaid have been around for decades. This would simply be an additional program aimed at eliminating a particularly devastating gap in the financing of health care. Fortunately, additional resources are not needed to fund such a system, but simply a shuffling of resources from one form of insurance to another.

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The Future of Managed Care: Integration of Financing, Risk Management, and Delivery

KEVIN W. KELLY AND JOHN J. PHELAN, PH.D.

ABSTRACT—The most significant transformation of health-care delivery and the health insurance industry is under way in the United States. It will change forever, and for the better, the way the delivery and financing of our nation's health-care is structured. We are witnessing the industrialization and consolidation of what was once a fragmented cottage industry.

The new system—we call it Wave III—will result in the re-establishment of the physician/providers as the key decision makers in our health-care system of the future. In this next phase of change, organized groups of physicians and hospitals will replace the current HMO insurance structure. This Third Wave will witness the integration of technology, managerial skills, marketing, sales, and negotiating acumen that were previously in the domain of health insurance companies (HMOs) into a delivery system where physicians and hospitals become partners focusing their coordinated efforts in managing health-care and the associated premiums.

Introduction

A radical transformation continues in the health care delivery and financing systems in the United States. Less than a decade after proclaiming themselves the integrators of health-care financing and delivery and the supreme aggregators of risk, the health insurance giants have abandoned the industry. These institutions (Metropolitan, Travelers, Lincoln National, etc.) failed to adapt to the technological, social, and governmental imperatives that pointed clearly to disaggregation of risk and risk management, not risk selection, as the logical future. Similarly, hospitals and physicians are only now realizing that their survival also depends on their ability to "manage" risk.[1]

We review the transformation of the group health insurance/HMO and provider industries since commercial health insurance was introduced over 25 years ago. Driving these transformations is the shifting of risk from employers and insurers to providers. It is characterized by three distinct waves. While these waves are presented here as discrete events for the sake of clarity, they are interdependent and have occurred at different times throughout the country, generally beginning on the West Coast.

This paper not only shows the evolution of risk management but also points to concomitant attention being paid to quality improvements in the way health care has been delivered under the old structures.

Wave I—Provider Industry

During Wave I, generally the period after WWII up to the early 1980s, most physicians and hospitals existed in a fragmented "cottage industry." Physicians generally practiced in one-, two-, or three-member, single-specialty groups with very little integration of information between groups and with other providers such as hospitals.[2] Physicians were reimbursed on a fee-for-service basis, a payment methodology under which patients and their physicians had little incentive to weigh the benefits *vs* costs of providing services.[3,4] Physicians were paid on a "usual and customary" fee-for-service basis by insurers, including Medicare. They were free to balance bill patients for the

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Table 1.—The Future of Managed Care—Integrating Financing and Delivery

Wave	Providers	Reimburse	Relationship	Profit Focus	Commercial Insurance
I (1980s)	Solo practice free standing community hospitals	Fee-for-service cost-plus	Adversarial	Risk selection	*Multiline carriers* CIGNA, Metropolitan, Travelers, Aetna, John Hancock
II (Early 1980s)	Group formation mergers and acquisitions	Discounted fee-for-service	Adversarial Negative economic impact on hospitals	Fee discounts Risk selection Utilization and physicians	*Entrepreneurial ventures* US Healthcare, United Healthcare, Oxford, Management
Foundation, Anthem					
IIa (Present)	• Variable successes of provider collaboration. • Managed care redefining itself. • Major deterioration occurring among payors and providers. • Leverage temporarily shifting back to organized provider units.			• HMOs leaving select markets and products. • HMOs' and PPMCs' stock prices fall. • Consolidation of large HMOs.	
III	Integrated	Multiplicity of	Allies/partners	Risk provider	Provider sponsored
	Provider system →	• Local/regional • Providers assuming more risk • Customer service driven • Coordinator of patient care • Flexible • Information centered			← PSN infrastructure

difference between their charges and the insurance company's payment.[5] There was no way to track quality of care among independent physicians and across specialties. Once a customer/patient entered the system, physicians controlled the distribution of services.[6,7] The fee-for-service system provided economic incentives for physicians to provide more services.

Hospitals were typically independent, freestanding and nonprofit organizations having been originally structured as charitable institutions.[8] Since the beginning of the Medicare program in 1965, up to 1983, hospitals were reimbursed on a retrospective "cost-plus" basis. This meant that Medicare paid the hospital for the care received by covered patients at cost, not the charges actually incurred for those services. There were no financial incentives for hospitals to function cost-consciously.[9,10] Quite the contrary, with fee-for-service reimbursement for physicians, the incentive was for hospitals to perform more services since they would be paid for whatever services they provided. A fiscal utopia, if ever one existed; albeit destined to fail.

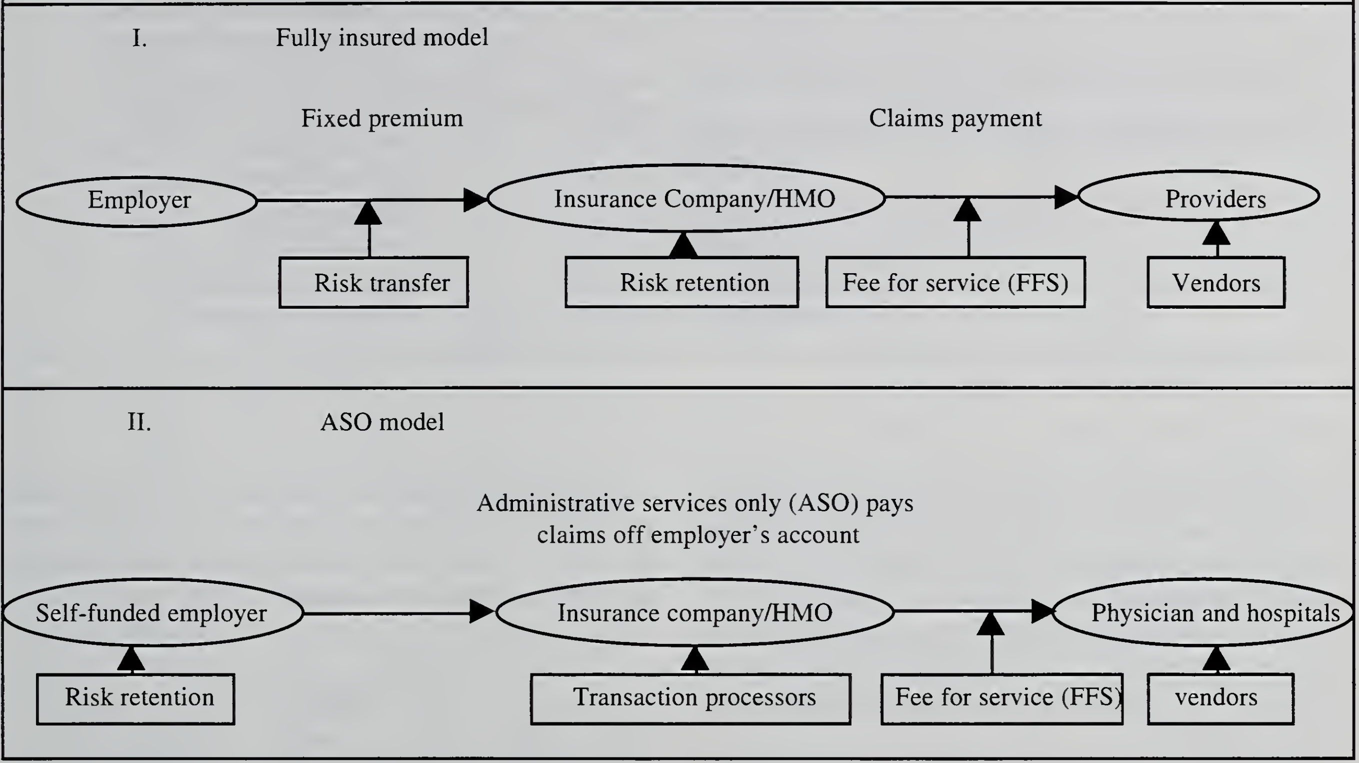
The "cottage industry" structure of hospitals and physicians was not conducive to managing patient care. Very little data was collected by providers or insurers that could be analyzed for effective risk management. During Wave I clinical and utilization data were not essential for making a profit in the health insurance industry. In fact, even if it were, providers were not organized in ways that this information could be used efficiently for managing patient care.[11,12]

Early on in the history of health insurance, private, for-profit insurance firms were rebuffed by physicians and hospitals when they attempted to collect information about charges.[13] The staff model HMO was an early effort at organizing physicians in a more industrialized model. Society in general, however, rejected the limited access offered by these early staff model HMOs.

Providers were not at risk during this wave. The costs were borne by employer groups or by insurance companies providing coverage to smaller employers. The cost of health insurance had not yet increased enough to cause employer groups to demand change.

Table 2 identifies the risk transfer mechanism commonly used during Wave I. It worked as follows: the employer either purchased a group health insurance policy from the insurance company (fully insured model), or self-funded the health insurance program for its employees and purchased Administrative Services Only (ASO)

Table 2.—Wave I
Traditional Health Insurance/HMO Risk



model from the insurance company. Most large employers did the latter. Most smaller employers paid the insurance company a premium in exchange for transferring the economic risk associated with expected health-care claims of their employees. Physicians and hospitals were vendors of service to insurance companies who either retained the ultimate risk or administered the health benefit for a self-funded employer. It is important to emphasize that physicians and hospitals were not risk managers under this model, they were *vendors of service.*

Insurance industry.—During Wave I, the fundamentals of the commercial health insurance industry were focused on actuarial and underwriting techniques and risk selection as a means of reducing loss ratios and maximizing profit.[14,15] Pre-existing condition clauses, experience rating small groups, "laser" underwriting, low lifetime maximums on mental health diseases were all commonly employed. These underwriting techniques were used to select healthy risk or minimize risk on sicker populations. Indemnity policies were sold with no controls in place to monitor utilization or quality of care.

A primary focus on information processing was rapidly paying claims in order to minimize member complaints. Consequently, huge mainframe computer systems were built for speed of processing claims, not analysis, and very little clinical information was captured. As long as profits could be achieved through risk selection and employers were satisfied with the premium, group health insurance companies thrived.

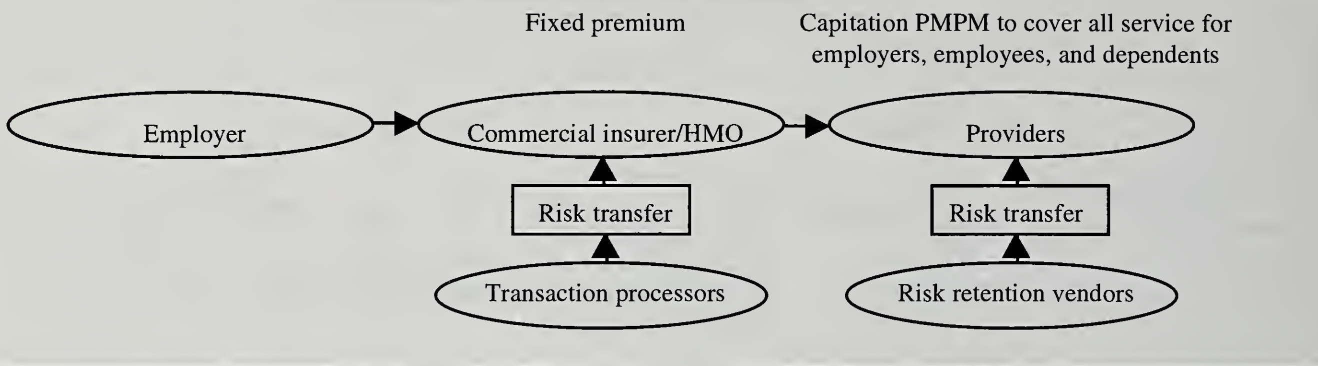
Wave II—Fall of the Titans

Wave II began in the early 1980s. As a result of rapid cost increases, corporate America began to move aggressively to shift its work force from indemnity insurance to managed care.[16] It was a transition period for the provider and group health insurance industry. The forces of Wave II caused hospitals, physicians, and group health insurance industries to radically change both their organizational structure and the fundamental way each made profits.

In the early phases of Wave II the emergence of HMOs, especially on the West Coast where market penetration was fairly high, resulted in reduced health-care insurance premiums.[17] The premium reductions were principally due to HMO price negotiation efforts rather than a result of managing care more effectively. HMOs were managing "costs not care."[18] There were, however, some capitation arrangements that did result in lower inpatient utilization.[19]

Insurance industry.—During the later stages of Wave II (late 80s early 90s), some of the most respected commercial health insurance companies abandoned group health

Table 3.—Wave II—Capitation Risk Transfer



insurance altogether (Travelers, Metropolitan, John Hancock, Prudential, etc.). Most left because they did not believe their organizations could continue to profit from the health insurance line of business.[20,21] The fundamentals of the business were shifting from actuarial techniques and cost management to care management which required partnerships with providers who had been their adversaries for many years.

As the Titans retreated, a new entrepreneurial-driven insurance structure emerged, that of national HMO chains; US HealthCare, United Health Care, Oxford Health Plans, HealthSource, Health Systems International, and Maxicare Health Plans are examples.

Armed with price negotiating skills rarely experienced by the provider industry, these companies out-maneuvered the large multiline carriers and, in some cases, bought their health business lock, stock, and barrel (ie, United Health Group's purchase of Travelers and Metropolitan). Excess capacity in both hospital beds and many physician-specialty areas allowed HMOs to negotiate lower prices in exchange for the promise of increased numbers of patients.

These emerging HMOs changed the focus of profitability by negotiating reduced rates for the promise of increased patients to hospitals and doctors. They paid providers less than the Wave I companies. They discounted fee-for-service charges by physicians and discounted charges or per diem rates for hospitals. The Wave II companies managed *cost* not *care*. In leveraging price for volume, these HMOs exacerbated their adversarial relationships with physicians and hospitals.

Many mergers occured during Wave II: US HealthCare was purchased by Aetna, HealthSource was purchased by CIGNA, and other consolidations of HMOs continued with the belief that increased "scale" would produce operating efficiencies, leverage in price negotiations with providers, and leverage to force providers to adhere to nationally defined practice guidelines. Speculation about the increased consolidation of the health insurance industry continues with Aetna's purchase of NYLCare and the proposed purchase of Prudential's health insurance line and the infusion of $3.45 billion to CIGNA with the recent sale of their property and casualty business to Ace, Ltd.

The "mega merged" HMOs of Wave II continue to focus on risk selection via underwriting, experience rating, and micromanagement of physician behavior. Physicians and hospitals became subject to unilaterally developed and superimposed practice guidelines and pre-approval procedures. The assumption here is that physicians are overutilizing services and need to be told what services they will be permitted to utilize. This period was remarkable because it introduced a third party, the HMO, functioning as a "broker of services" between the physician and the patient in determining the necessity of care for a patient. It has led to the current consumer, physician, and governmental revolt against the HMO/managed care industry and increased organizational activity among providers.[22] Ironically, the New Wave II Titans are helping to create a structure that will ultimately render them obsolete.

Provider industry.—The new national HMOs have facilitated a necessary change in the provider industry. Physicians and hospitals are no longer content to be vendors of service to national HMO chains and insurance companies. As a result, integrated delivery systems of hospitals, physicians, and subacute providers are forming across the country. Physicians, once content to be individual practitioners, are rapidly bonding together into regional group practices— both single and multispecialty.

Wave II also has lowered the rate of growth in physician income. Much of this has been through price negotiation by the HMOs and stringent utilization review protocols that prohibit physicians from admitting patients to hospitals without approval from the HMO. During Wave II inpatient hospital utilization has fallen due to, among other things, utilization management programs and pharmacological and technological innovations that allow same-day surgery and home care to substitute for inpatient stays. Additionally, a national oversupply of physicians in certain specialties has allowed competition for patients to drive down fees and incomes.[23,24,25]

Capitation is now being introduced by many HMOs as a means to better align physician and hospital financial incentives with cost-effective care.

Table 3: Wave II—Capitation Risk Transfer points out the movement of risk to providers in the capitation model. During Wave II, some HMOs and insurers transfer the "insurance risk" traditionally retained by the carrier or self-funded employer to the provider via a capitated payment for which the provider group is then at risk for a predetermined set of services for that population. Providers are just beginning to recognize that the moment they engage in a capitated contract, they are at risk and become the de facto insurance company. They are now required to "manage" risk on a local basis.[26,27]

The End of Wave II

Today's current merger mania activity is transitioning the Wave II market from one of small- and medium-sized commercial HMOs and Blue Cross Plans to one comprising six to 10 "modern day titans." This situation is similar to that in the early 1980s when six or seven multiline carriers dominated the health insurance market.

If indeed the past is prologue, we will continue to see the following trends as we progress through the final stages of the second wave:

1. Increasing premiums.—Quarterly earnings requirements and fewer competitors in some markets are causing significant price increases for the first time in several years according to a recent survey by the William Mercer Company. The Northeast experienced an 8.8% increase on its health plan costs during 1998.

2. Reduced emphasis on customer service.—Mergers distract management from service issues. In this environment HMO employees can become preoccupied with imminent downsizing, which can result in a decline in customer service and provider relations.

3. Reduction in regional/local innovations.—Economies of scale and expense reductions required to satisfy investors in these merged enterprises force centralization of services, mitigating the opportunity for regional/local innovation which is essential for managing care more effectively.

4. Increased provider dissatisfaction.—National HMO chains create a commodity market where physicians and hospitals become vendors of service that can be manipulated by national management/utilization review protocols. Providers will resist being controlled by insurance companies/HMOs and member satisfaction will be affected.[28]

5. Continued regulation to reduce control by HMOs and allow provider-sponsored alternatives to compete.

6. Transfer of risk (capitation) from HMOs to provider groups.

7. Large HMOs leaving select markets and products (Medicare HMO Program).[29]

8. Renewed government intervention focusing on patient rights, quality, and access to care.

Wave III—the Metamorphosis

Wave III is now upon us—and it is a "radical metamorphosis." We expect the development of a health-care delivery, financing, and medical education system never before experienced in this country. This Third Wave will integrate technology, managerial skills, marketing, sales, and negotiating acumen that were previously in the domain of health insurance companies (HMOs), with rapidly developing integrated delivery systems composed of physician and hospital partnerships.

The rewards of Wave III will go to those integrated delivery systems (IDS) that can industrialize their processes and streamline their decision-making to improve the quality and utilization of services.[30,31] This new wave of provider-sponsored, managed care companies will more effectively align incentives of hospitals and doctors. These IDS will be accountable for the quality, delivery, marketing, and premium of health-care services to employers, government payers, and individuals. They will capture the customer and be directly accountable for value-added health-care products.

Supporting this thesis are indications by a few large purchasing groups of employers that they intend to bypass managed care plans and contract directly with large provider units with potential savings of about 20%, to be divided between purchasers and providers. It is likely that once purchasers start on this course direct contracting will spread, particularly because of the desire of hospitals and physicians to regain at least some of the market power they lost earlier.[32]

Integrating the financing and delivery of health care.—The most significant factor in the changing health-care financing and delivery system is the logical and unavoidable alignment of incentives around financing and delivering health-care services by transferring risk with organized provider groups through capitation or percent-of-premium payments.

Why is this so significant? Because it sets off a chain reaction as follows:

1. Provider Groups are "at-risk" under capitation or percent-of-premium payment structures.—This disaggregation of risk requires providers to be organized to manage that risk effectively. The ability to manage risk cannot be accomplished without timely, accurate, and well-organized information systems (ie, claims, encounter, demographic, and eligibility data, etc.).

Capitation and the advent of "evidence-based medicine" will return the accountability and responsibility of both quality and cost to the provider/physician unit at risk. Evidence-based medicine appears inherently more cost effective than the traditional fee-for-service medical delivery system.[33]

In Wave I and II, insurance companies and HMOs maximized profits by selecting risk rather than by managing it. Because of this, their information systems for the most part, were structured to pay claims efficiently, not analyze information for managing care. Hundreds of millions of dollars were spent developing these legacy claims payroll systems which produced information of little value for medical risk-management purposes.

For Wave III provider organizations, information is essential to ensuring quality of care and financial solvency. As such, Wave I and II insurance companies and HMOs will be required to transfer the transaction/information processing function along with risk. Without the risk and transaction processing functions, the conventional HMOs will become sales/marketing companies.[34]

2. Underwriting and pricing.—As Wave III continues to emerge, provider-sponsored organizations will quickly realize that along with assuming more financial accountability and more autonomy for the quality of care comes the need to develop expertise in the area of underwriting, pricing strategies, and actuarial analysis for the patient populations they serve. Without this expertise provider-sponsored organizations will not be able to evaluate capitation contracts to determine whether they contain a workable share of adverse risk. Contracts with a disproportionate share of adverse risk can lead to insolvency for unwary provider-sponsored organizations.

Let's take the example of the regional cardiology group (150 MDs) that decides to go "at risk" for Medicare patients. If this group were to encourage Medicare recipients to choose their risk pool they would likely attract a disproportionate share of patients with cardiac problems. Since there is not yet meaningful severity-of-illness adjustment for Medicare risk reimbursement, this group's cost could exceed their revenue resulting in economic losses.[35]

As Wave III develops, the conventional insurance company/HMO no longer "at risk" will care less about the underwriting risk of individual members and more about the volume of members it attracts to its capitated plans. Medical risk management will be transferred to provider-sponsored organizations. HMOs will focus on volume because this is where the greatest income potential will reside. The more members they can offer to provider groups, the more likely they will be able to leverage price for volume through capitated contracts - contracts requiring providers to manage medical risk effectively in order to reap their own fair share of profit. The inherent conflict between insurer and provider is perpetuated here although they have now completely switched roles.

3. Sales and marketing.—The delivery and quality management of health-care will be inextricably related to the financing, transaction processing, marketing and claims payment, pricing, and underwriting systems traditionally the domain of insurance companies and HMOs.

Physician groups and hospital systems will no longer be content to function as vendors of service to be leveraged by HMOs and insurance companies. They will need to structure themselves to capture and control the premium dollar as well as the "customer relationship" that accompanies the marketing/sales and underwriting functions of the Wave II insurance companies/HMOs.

Implications of Wave III—Added Value for the Customer

Wave III will dramatically improve the health-care system in the United States. A much more rational market is developing requiring physicians, hospitals, employers, and consumers to align their focus on quality and value-added care. As risk becomes more disaggregated, and evidence-based medicine becomes more commonplace, the traditional insurance companies and Wave II HMOs will become obsolete.

Providers.—In a mature Wave III market, providers will organize into effective and efficient risk-management organizations. They will be directly responsible and accountable for the price and quality of the care they deliver. Physicians will not be subject to arbitrary practice guidelines but will be actively involved in developing and monitoring the quality and cost of care and have immediate access to guidelines that they have collectively "bought into" and for which they have agreed to be accountable. The systems be will continuously refined by the provider-owned, managed care companies to provide the information physicians need to manage the care of their enrollees.

Technology.—Technology will be introduced which will support physician decision-making and evidence-based medicine. Internet technology will allow immediate access to information necessary to assist physicians in making increasingly more complex analyses with the introduction of many more variables than were available in the past. Physicians and other scientists will use technology to add precision to and improve multivariate analysis/diagnosis.

Table 4: *Wave III—Provider-sponsored managed care Companies* show a much more efficient/streamlined structure where provider-owned, managed care companies assist in the integration of the financing and delivery of health-care services.

Employers.—In the Wave III market, employers or employer coalitions have direct access to demand high-quality, cost-effective care. They will force competing provider-sponsored, managed care companies to continuously add value. In some markets, these employer coalitions will drive the innovations through strategic and equity partnerships with provider-sponsored, managed care companies. Eliminating superfluous insurance companies/HMOs and dealing direct will reduce the price. The market will rationalize itself. Employers will shift benefits from "entitlement" programs to "defined contribution" programs thus shifting some responsibility for prudent purchasing to the employee/consumer.

Consumers.—In Wave III, health-care delivery decisions will be returned to the physician and the patient (consumer). Physicians will be held accountable for cost, quality, and patient satisfaction based upon continuous and publicly available feedback and surveillance by patients and physician peers operating in their regions. Consumers and their employers will deal directly with providers and will have more efficient means of requiring local quality and accountability. In short, we'll have better informed consumers looking for value from their providers.

Wave IV?

One thing is certain, Wave III is not the final frontier; however, virtually every economic and organizational marker in the health-care industry today tells us it is coming. In some areas of the country it has already arrived. The privilege or responsibility that providers have is to become actively involved in shaping the future of health-care to provide a more socially responsive and cost- effective system.

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    In the 1990s we began to see some hints of Wave III with the development of physician practice management (PPM) firms. PPM's developed as a result of the spinning off of medical group practices from the large HMOs (CIGNA, Aetna, US Healthcare, Prudential, etc.) who unsuccessfully attempted to integrate vertically in the health care field in the late 1980s and early 1990s. Most of the PPMs (PhyCor, MedPartners and FPA Medical Management to name a few) have not met with capital market expectations. Many PPMS functioned to provide physicians with access to the capital markets in order to take advantage of economies of scale. Very few PPM's have been successful in building the kind of information systems and expertise necessary to manage risk in the way we believe will occur in the full blown development of Wave III.

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35. *HCFA plans to introduce a risk adjustment factor for the Medicare program soon which should assist physician/providers in the transition from Wave II to Wave III.*

Commentaries

Congress Must Do More to Protect Patients' Rights

A decade ago, the control of our medical system was in the hands of physicians. Patients could see any doctor they wanted. Decisions about which drugs to use for a particular illness, which specialists should be consulted, how long a patient should stay in the hospital, what tests and procedures should be ordered, and what fees should be charged were generally left to the judgment of the patient's physician. Doctors simply did what they thought was best for their patients.

In the late 1980s, employers began complaining to insurance companies that premiums were too high and that the insurance companies needed to do something about it. The response was managed care and health maintenance organizations. Some doctors also believed that health costs were getting out of hand. But after a decade of trying to practice under the thumb of HMOs, most physicians are convinced that they cannot practice good medicine because of the interference of HMOs.

Insurance executives took authority away from physicians and limited or eliminated many patients' rights, such as being able to choose your own doctor. Suddenly, medicine became big business and concern for the individual patient disappeared. Suddenly shareholders' profits took precedence over patients' welfare. Patients have become so angered over HMOs' cost-cutting strategies that a "Patients' Bill of Rights" is being debated in Congress. But there should be no need for a patients' bill of rights in a country that has more personal freedoms than any other in the world.

From the beginning, Congress should have made HMOs realize that any intrusion on "patients' rights" would not be tolerated. Ironically, the so-called patients' bill of rights approved by the Senate benefits HMOs more than patients. What help it gives to patients is limited to the 48 million patients in self-insured plans who have pretty good benefits anyway, not the 160 million patients who have state-regulated private insurance.

Furthermore, the Senate bill doesn't address the 43 million patients who have no insurance at all or the growing number of senior citizens who are being dropped by HMOs. HMOs are planning to spend about $20 million on a public relations campaign to improve their image. Yet it is predicted that HMOs will drop 327,000 Medicare patients next year because HMO executives claim their companies can't afford to take care of the seniors. By comparison, organized labor is spending about $400,000 and the American Medical Association about $300,000 to defend patients' rights.

In politics, money talks. And with HMOs spending so much more promoting their interests than labor and the AMA are spending to promote the rights of patients, it is easy to see why health consumers should be concerned. With HMO's the doctor-patient relationship is greatly disregarded. For example, when disputes arise with HMOs regarding patients' care, doctors do not have the final say in what is medically necessary. If the HMO disagrees with the doctor, the final decision is made by an outside appeals board. This wastes doctors' time, delays treatment, and causes patients and their families unnecessary anxiety and worry.

In considering patients' rights, the Senate refused to change the current law that says an HMO cannot be sued if its decision harms a patient (unlike doctors and hospitals). This protection comes from the Employee Retirement Income Security Act, a law enacted more than 20 years ago, long before most patients even heard of HMOs. The original intent of ERISA was to protect employees' pension plans, not to free HMOs from malpractice suits. HMOs argue that if they do become liable, they will be inundated by malpractice suits and the cost of premiums will skyrocket. But in Texas, where legislation holding HMOs liable has been in place for two years, just three lawsuits against HMOs have been filed. In Connecticut, a lawsuit has been allowed to proceed against an HMO. Some lawyers believe that eventually HMOs' immunity from malpractice suits will be overturned.

Fortunately, the patients rights bill in the Senate allows women a minimum 48-hour hospital stay after childbirth or a mastectomy, overturning some HMO policies aimed at getting them out of the hospital within 24 hours. But HMOs want early discharges for women for a multitude of other conditions that are equally serious. The real issue is that women (and men) are sometimes discharged too soon following hip surgery, heart failure, pneumonia, and many other conditions. By concentrating on mastectomies and childbirth, and appealing to female voters, the Senate overlooked the bigger issue of premature discharge for many other illnesses. I don't know whether this is bad judgment or good politics. Probably a little of both.

We doctors have our personal reasons for being angry about HMO policies. HMOs are strangling us with their red tape. The administrative hassles and telephone calls we physicians have to make to HMOs to get clearance for ordering tests and consultations is time-consuming and takes away from time that could be spent with patients. As primary care doctors, my partner and I have raised our overhead by $20,000–$30,000 a year to pay for extra help to take care of managed care's red tape.

In order to help physicians protect themselves against HMO intrusions, the AMA recently decided to form a physicians' union. Some fear that this is being done to protect physicians' economic interests and might raise the cost of health care. But most physicians I know want a union because they believe it is the only way to counterbalance the inordinate power that HMOs have. Many doctors and patients believe HMOs are the Evil Empire of the '90s. In some cases, they have made doctors and patients use medical resources more wisely; but their cost-cutting has taken on a life of its own. Trying to run our health-care system like a large corporation makes it too impersonal for most patients.

There appears to be more support in the House than in the Senate for getting tough with HMOs. Let's hope the House insists on real reform and forces the Senate to listen. Members of Congress need to understand how HMOs jeopardize patients' care with excessive cost-cutting, and how HMOs waste physicians' time with unnecessary red tape.

Congress is the protector of last resort for patients' rights and must temper HMOs' zeal for profits with concern for patients' welfare.

Edward J. Volpintesta, M.D.
Bethel
Chairman of the Board of Trustees of the
Fairfield County Medical Association
and President of the Danbury Medical Society
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From *The Connecticut State Medical Journal*

October 1949

The New Building—Start to Finish

JAMES DOUGLAS GOLD, M.D., *Bridgeport*

The Author. *Chairman, Trustees of Building Fund*

AT the annual meeting of the House of Delegates of the State Society held in May, 1943, Dr. Creighton Barker, secretary of the Society, in his annual report recommended that the Society build a permanent office building and that there be appointed a committee of five members of the Society labeled "Trustees of the Building Fund." This building would provide space for the secretary's office, editorial and Journal office, with rooms which could be used for the medical examining board, woman's auxiliary, cancer fund, cancer committee, etc., all of which are closely allied with the State Medical Society.

This resolution was brought before the House of Delegates and approved unanimously. The five member Board of Trustees was appointed by the Council of the State Society. The original Board was composed of Drs. Sullivan of New London, Leak of Middletown, George M. Smith of New Haven, Burlingame of Hartford, and Gold of Bridgeport as chairman.

The Board of Trustees immediately proceeded with a great deal of interest, feeling that it was a project that should be carried out as quickly as possible for the need of office space for the Society was urgent.

The first decision the Trustees had to make was where the building should be located. After polling the Society by mail, it was definitely pointed out that New Haven would be the most convenient and medically centered place in the State, easy of access by rail or automobile. That decision was brought before the House of Delegates and they voted to accept New Haven as the location of the State Society office building.

Our next move was the fund raising campaign. We went before the Council and told them that $150,000 should be raised and the conclusion of the Trustees was that each member of the Society should be solicited by letter, with a card enclosed for him to sign stating the amount that he would be willing to pledge, three years being allowed for him to complete the pledge.

You all are aware of our efforts to collect $150,000 from the members of the Society, by letters, pleading letters, pictures, personal solicitation, and reports of progress. By such methods, in five years we had $75,000.

Then after searching for a proper location for the building, as the years 1944 and 1945 came along, several pieces of property were inspected which were thought to be suitable, but the expense was exorbitant. We then looked for houses that might be converted, but each time the Board came to the conclusion that they did not want an old house converted into an office building.

Time went on. We could not decide upon a location for a building site, nor could we decide upon a building. Finally the site at the corner of Edwards and St. Ronan Streets was chosen. The Trustees recommended to the Council that the building lot be purchased for $12,000, and in 1946 the deed was received and the location of the State Society office building definitely settled.

Plans were sought from the architect for a building suitable for that location. Estimates were received, but they were far beyond our $75,000 limit. This necessitated new plans.

Reprinted from the *Connecticut State Medical Journal*, October 1949.

In January 1949 the plans had been so completed they were put out for bids for construction. Six construction companies made their offers, prices ranging from $58,000 to $66,000. These bids were presented to the Council and the Trustees were authorized to draw up a contract for the lowest reliable builder. After due consideration and consultation, the E & F Construction Company of Bridgeport was given the job. In their contract they agreed to have the building ready by July 15, 1949. After the contract was let the construction moved along very rapidly, and by the time this letter is received the building will be complete and occupied.

It may have appeared to many of the members that the construction of an office building, the raising of the funds, and the choosing of a location, all would be a very simple proposition. When we consider that the membership of the Society is in the neighborhood of 2,500, a moderate contribution from each member would produce the proper fund. At first, after the notices were sent out from the State office and the results came in, everything seemed to be as we had anticipated, but after a few months, the response was very meager. Another attempt was made to stimulate those who had failed to sign the cards, urging their contributions, until the fund grew to the amount of about $75,000. We had paid $12,000 for the land, paid for the architect, paid for the title search, so that our funds were reduced to about $60,000.

The Trustees then went to the Council and told them about our problem. Since $75,000 at least should be available, we asked the State Society to take from their general fund enough money to meet the $ 15,000 which was needed to complete the $75,000. The Council agreed to that proposal, with the understanding that we should continue to solicit money and as it accumulated we should return the $15,000 to the treasury. Under these circumstances the building was finished with adequate space for everything that we had anticipated, but still 50 per cent of the members, I repeat, 50 per cent of the members have not contributed after repeated personal solicitations.

In the entrance hallway there is a bronze plaque with inscribed names memorializing past outstanding members of the Society. These memorials were given by relatives and friends of the physicians.

The building is now finished. It is yours. It faces St. Ronan Street at the corner of Edwards Street, landscaped on the front and on each side. In the rear is a large parking space, graded and hard surfaced.

The Trustees have been enthusiastic and faithful in carrying out your wishes, aided by the indefatigable cooperation of Dr. Barker and the office personnel.

Visit your new building, inspect it thoroughly, and realize anew the great need it fills and that "under the inspiration of our chosen leaders its functioning will be a material force which will have its greatest reflection in public service."

The Connecticut State Medical Society

H. S. Burr, *New Haven*

The Author. *E. K. Hunt Professor of Anatomy, Yale University School of Medicine*

THE genealogy of institutions is as interesting as that of individuals, for both derive from many sources and both concentrate, in a single unit, diverse origins. The first statewide association of the physicians of Connecticut is a case in point. Its official birthday occurred in 1791* when the State legislature, after some eight years of discussion, granted the first private charter to the incorporators. This was an uncommonly long gestation, the reasons for which lie lost in the inadequate records of the time.

The charter provided astonishingly broad powers for "the improving of medical practice, medical education, and friendly relations among physicians." It was probably the wide scope of these authorities which delayed the granting of the charter for such a long period. The original application was made to the Colonial Assembly to enable the physicians of the colony to determine fitness to practice, to limit membership to those deemed fit, and to have legal authority in the collection of fees. No better statement of the general desires of the physicians is to be found than that included in the records of the medical society in Litchfield County.

"While Litchfield is the youngest county in Connecticut, yet in 1766 it set an example worthy of imitation. The province had always been greatly pestered by a generation of men called quacks who, with a few Indian nostrums, a lancet, a glister pipe, rhubarb, treacle water mixed with Roman bombast of vena cave and vena porta, attacked fevers, nervous disorders and broken bones and, by the grace of perseverance, subdued nature and helped their patients to a passage to the world of spirits before they were ready. The surgeons and physicians who were not quacks formed themselves into a society for the encouragement of literature and a regular and wholesome practice. But these laudable endeavors were discountenanced by the General Assembly who refused to comply with their solicitation for a charter because the quacks and the people said, 'If the charter is granted, the learned men would become too rich by a monopoly, as they had in England'."

Obviously, motives were suspect and it required nearly thirty years before the Assembly was convinced that their fears were groundless. Nevertheless, the presence of a large element of economics in all the early discussions can not be denied. Unfair competition was rampant and, as so often happens, the quack with his air of confidence and his convincing promises of returning health, seemed to be better able to collect fees, than could the competent practitioner with his less grandiose hopes for the future. As Dr. Creighton Barker has pointed out, the practical business of making a living while practicing medicine was as necessary in the eighteenth century as it is today, and there was in those days a firm conviction that the laborer should be worthy of his hire, even though it was often hard to collect.

But did economics bulk so large in these early years? The scramble for professional priority, for personal aggrandizement is not unique to any century nor to any trade or profession. Pirates are always with us. But the record of the centuries could not be so illustrious as Medical History has been and is, if the dominant ideal had been personal advantage.

On the contrary, the evidence is clear to any reader. Other than economic ambitions played their part. Witness the powers granted in the charter. Not only was the proposed society to have the right to "improve the practice of medicine," but also to "foster medical education and friendly relations among physicians." These rights were not basically economic but rather were ambitions or ideals looking beyond immediate reward. Undoubtedly, it was these elements in the application for the charter which finally changed the minds of "sceptical gentlemen" of the Assembly. It could be argued that these ideals were but the sugar coating intended to make the bitter economic pill slide down with less unpleasantness. But shams are always found out and the long and distinguished record of the State Medical Society attests to the validity of these early ideals.

In fact, if we take the powers granted in the charter as expressions of the hopes and desires of the physicians of Connecticut, the history of the Society turns out to be a

**[The correct year of the Society's Founding is 1792.]*

record of the long struggle to make out of ideals, solid achievement. The genes were there in the beginning, so let us trace their subsequent history.

Take the first of the rights—"to improve the practice of medicine." This has been a steady movement, beginning with the first item of business on the agenda at the organization meeting held in Middletown on October 9, 1792. After the election of officers, there was much discussion of ways and means of living up to the new power granted the Society to control and improve medical practice. A committee was appointed to pass on the qualifications of candidates and thus became the first licensing board in the State. This careful self regulation (almost unique to the medical profession) continues to the present, although the actual handling of the licensing was transferred to the State in 1892.

There was another item in the early plans of the young society. Nostrums, secret proprietary medicines, quackery in general were widespread. To stamp out this milking of the public purse by chicanery, the Society banned the prescribing of patent and proprietary medicines and ruled that members guilty of infraction of this regulation should be expelled from the Society. Drastic as this action was, the original group of physicians went even further and banned from membership all those who even "consulted" with prescribers of patent cures. Numerous examples of the operation of these methods of improving medical practice are to be found in the records of the succeeding years. Fortunately, the number of infractions has steadily decreased over the years as the dignity and standing of the profession has grown.

This, then, was the first step taken by the Society under its new charter, but another was to follow soon. During the early years of the nineteenth century, Mason Fitch Cogswell of Hartford was a leader in Connecticut medicine. A surgeon, he early became deeply interested in the problem of the care of the insane in the State. Therefore, when Dr. Dwight of Colchester presented a communication to the first meeting with Dr. Cogswell presiding, he vigorously supported a motion to appoint a committee to study the number, location, and care of lunatics and to prepare a report of the next meeting of the Society. Unlike many such proposals, this did not die aborning in committee. Rather, it started a crusade for the public care of the insane culminating, through the efforts of Eli Todd of Hartford, in the proposal to the Hartford Medical Society that the physicians of the State organize a hospital for the care of lunatics. It is interesting that eight years elapsed from the initiation of this activity in the Society until it reached fruition in the vote of the Society in May, 1821, that some of its own funds be appropriated for this purpose. Public subscription enlarged the sum available, so that after the granting of a charter to the Hartford Retreat, patients were admitted to the new hospital in April of 1824 with Dr. Todd as its first medical director.

Not content with achievement in the area of public care of the insane, Dr. Cogswell also found time to further another "improvement in medical practice." As a result of an unfortunate circumstance in his own family, he, with the aid of a few of his medical colleagues, organized and got under way the Connecticut Asylum for the Education and Instruction of Deaf and Dumb Persons. This was the first school of its kind in America—a monument to the devotion and vision of Dr. Cogswell.

Special institutions of these kinds, however, in no manner of means met many other pressing needs in the practice of medicine. Not only must particular classes of patients be cared for, but there was urgent need for a general hospital for the State. An influential member of the Society in those early years of the nineteenth century was Jonathan Knight. He had been chosen and educated through the efforts of President Timothy Dwight to be a member of the faculty of the Medical Institution of Yale College. Originally he was appointed as an assistant to Dr. Cogswell of Hartford who had reluctantly agreed to accept the Chair of Professor of Anatomy at Yale. When press of other duties prevented Dr. Cogswell from entering in his duties at New Haven, Dr. Knight was immediately promoted to the chair. This was the beginning of his long and active career devoted to the needs of the time and to the furtherance of the purposes of Medical Institution and the State Society.

It must have been obvious to the small faculty of the new medical school at New Haven that satisfactory operation could be realized only if clinical cases were available for teaching and study. Discussion of this problem culminated in a report to the Society on May 11, 1825, "concerning a general hospital in this State." Implementing the report are votes by the Medical Society of New Haven on May 8, 1826, by the Medical Society of the State on May 26 of the same year, and by the act of incorporation of The General Hospital Society of Connecticut on May 26. So far as paper organization was concerned, things moved rapidly but the necessary wherewithal to build such a hospital was slow in accumulating. This is the more surprising since in that year the enthusiasm of the faculty was made clear by the fact that they individually pledged ten per cent of their incomes to the hospital, providing the sum did not exceed $100 a year. At the same time, the State Society voted to appropriate the sum of money derived each year from licenses and degrees awarded by the Society. However, an element of caution appeared in the proceedings of the annual convention, since it was agreed to appropriate the $5 derived from each M.D. degree, providing that the sum of $10,000 be established within five years. While these sums seem small in comparison to the huge appropriations of the current national government, it must be remembered that the purchasing value of a dollar in the early part of that century was at least ten times greater than it is today. These then were respectable amounts and hard to come by. It is not surprising then that development was slow during the next five years. After some juggling of committees, Drs. Goodsell, Knight and Hooker succeeded in raising the necessary funds and proceeded to purchase "a fine site and ample grounds" and, commissioning Ithiel Towne as architect, erected "a commodious hospital structure of liberal proportions." This was "Old North," more recently replaced by the modern buildings of the present New Haven Hospital. From this modest beginning, the General Hospital Society of Connecticut has grown to a position of genuine service, both to the local and the State Community, even though adequate financial support has been as hard to recruit as it was a century earlier.

More than a quarter of a century passed before another general hospital was organized in the state. This was the Hartford Hospital chartered in 1856. Initiated by the Hartford Medical Society as a consequence, it is said, of the "terrible accident at the car factory in 1854," the State Society took no official part in the organization and founding of the institution, although many of its members participated in the laying of its corner stone on May 27, 1857.

From the genes of "improving medical practice," the Medical Society of Connecticut then developed techniques for guarding the public through licensing of physicians and organizing and building hospitals for the care of the insane, the deaf and dumb, and the seriously ill.

But this was only one of the basic genetic components incorporated in the inception of the State Society. A second was the power to develop the necessary procedures for the improvement of "medical education." The need for this was apparent. The older physicians in the colony had obtained most or all of their training abroad. The younger men served either as apprentices with practicing physicians or studied in medical schools in neighboring colonies. While this worked reasonably well, there must have been many doctors who hoped for a medical school, first in the colony, and later in the state. But the first formal record of a proposal for medical education is to be found in the diary of President Ezra Stiles of Yale College, and in the text of a lecture on medical literature delivered on March 21, 1793. From at least two different sources came the origins of President Stiles' lecture. One of the ablest presidents Yale has ever had, he was deeply impressed by the wording of the original charter given to the Collegiate School at Saybrook in his Majesty's Colony in 1701. This charter empowered the seven trustees, with the Reverend Mr. Pierson as president, to establish a collegiate school "wherein Youth may be instructed in the Arts and Sciences, who through the blessing of Almighty God may be fitted for Public employment both in Church and Civil State." He was keenly aware that for the major portion of its early history, the "Collegiate School" renamed Yale College in 1718, had concentrated on the Arts. Instruction was given in Latin and Greek, Philosophy and Logic, Mathematics and Religion. Science, then a relatively newcomer, was represented only by mathematics and logic. But Stiles was undoubtedly fully aware of the fact that medicine was a science as well as an art and a fit servant of the "Civil State." As president of a chartered institution, he was obligated to fulfill all of the obligations of that charter. To establish Science in general, and Medicine in particular, as part of the instruction offered, was his bounden duty.

But there was another inspiration for the move. For some years the physicians in the colony had been bestirring themselves, seeking more adequate recognition of their services and more opportunities to grow and develop in their chosen profession. To this end, local groups banded themselves together for discussion and mutual education. It probably never will be known which group was the first in the field. But Norwich, in 1763, was certainly among the first, although to the confirmed "Litchfieldite," the County Medical Society of Litchfield has priority. However, the physicians of New Haven were not laggard for, on the tenth of December, 1783, a group of them met at the "Coffee House" in New Haven for the purpose of forming a County Medical Society.

New Haven was a small community, and a meeting of this sort must have been known to many. Since one of the topics of discussion in most of the small groups of doctors was ways and means of improving the training of doctors, it is almost certain that Ezra Stiles was quite aware that others beside himself were concerned in medical education.

Unfortunately Stiles did not live to see any concrete consequences of his lecture. It remained for Timothy Dwight to push the enlargement of Yale College. In this he was ably abetted, not only by his own Trustees, but also by the enthusiastic support of the young Medical Society of Connecticut.

In October, 1799, the Society appointed a committee "to take into consideration and digest some regular system of education to be pursued by candidates for the practice of Physic and Surgery in this State." At the same time President Dwight was busy preparing for the time when funds should be available with which to carry out Ezra Stiles' proposal for Science in Yale.

The first step in this was, interestingly enough, not the development of an elaborate scheme but rather "to select a young man worthy of confidence, and allow him time and opportunity, and pecuniary aid to enable him to acquire the requisite science and skill, and wait for him until he should be prepared to begin." And so, in due course, there was appointed to the Chair of Chemistry and Natural History in Yale College, Benjamin Silliman. "From the first," Silliman notes in his diary, he "expected to be ultimately connected with the Medical School."

With the New Haven Medical Society interested in Medical Education, and a new professor of Science in the College, it was not surprising that the Corporation of the College felt it wise and necessary to consult with the Medical Society of the State. To this end, a letter was read at the meeting of the Society in Hartford in 1807. This resulted in the appointment of a joint committee which, under the chairmanship of President Dwight, drew up Articles of Union acceptable to both groups. Joint action was necessary because of the broad degree conferring power granted to the State Society by its charter and the similar rights of the College. After some delay, twelve articles of union were agreed upon and approved in 1810 by the legislature. In this act, the President and Fellows of the Medical Society and of Yale College were empowered to unite to form the Medical Institution of Yale College. Two committees "of an equal number of persons appointed by the Medical Convention and the Corporation of Yale College" were directed to nominate the Professors on the one hand and to act as an examining board for the candidates in medicine on the other.

Started thus in 1810, actual operation was delayed by lack of funds until the fall of 1812, with a roster of thirty-seven students in residence in 1813. The first character resulting from the genes of "medical education" in the original charter was the creation of a school operated jointly with Yale College. No better statement of the benefits deriving from such a happy marriage can be found than in the words of Dr. Jonathan Knight delivered to the entering class in 1853.

"The result of this arrangement has been eminently happy; all unpleasant feeling was at once and forever allayed; the members of the Society became interested in the school; we have at all times had the benefit of their counsel and support and it gives me pleasure to state that no instance of disagreement has ever arisen among the members of the board or between the School and State Society; on the contrary, each has regarded the other as a fellow laborer in the endeavor to promote and advance the interest of medical science." The fruits of this colligation have endured to this day, although there have been times when the relationship was not so close as at the beginning.

In our own day two more important consequences of this early union have been realized. The degree conferring right given to the Medical Society of Connecticut in its original charter still stands on the books. And it is due to the inspiration of two present officers of the Society, Drs. Barker and Thoms, that the honorary degree of Doctor of Medicine was conferred on three prominent teachers and investigators. They were Russell Henry Chittenden, Yandell Henderson, and Alice Hamilton. This revival of an old right is a happy occurrence, for in so doing the Society honors itself as well as the recipients.

A second fruit of conjugal bliss has been the fostering of a program of post-doctorate education among the physicians of this and neighboring states. Two practical plans have been developed. The first of these was the establishment, some twenty-five years ago, of an annual Clinical Congress held each fall at the Yale School of Medicine. This was one of the earliest attempts by state medical groups to continue medical education after the awarding of a degree. Its success has amply proved the wisdom of the move.

The second development, stimulated by the very great success of the post-doctorate Seminar in Neurology and Psychiatry initiated at the State Hospital at Middletown by Dr. Paul Yakovlev, was a contribution to the Yale School of Medicine by the State Society to further post-doctorate seminars in a wide variety of medical subjects given largely by members of the faculty of the school. The eagerness with which these opportunities have been grasped by the physicians of the state attests to the fact that medicine is a learned profession and that education does not cease with the winning of a diploma and of a license to practice.

The third and final genetic component of the State Society was labelled in the charter as "improving friendly relations among physicians." Under such a general heading many kinds of activity could and have emerged. In fact, to list all the procedures developed in the Society to foster better relations among physicians and between doctors and the public, would result in a somewhat tedious catalogue of proposals and acts authorized by the State Legislature.

There is, however, one particularly interesting example of the working of this set of genes in the State Society. The successes achieved in licensing and in medical education must have been not only gratifying to the membership, but also a telling example to neighboring states. Moreover, the practical rewards following the association of small groups for mutual benefit must have suggested the extension of the procedure to larger areas. The records apparently do not reveal who first proposed a colligation of state societies, but it is clear enough that Dr. Jonathan Knight, who occupied a prominent place in Connecticut, not only as a physician and teacher but also as a public servant, was a significant figure in what is often now called medical politics. In any event, it is a matter of record that when the New York State Medical Society called for a National Medical Convention to be held in New York City in May, 1846, Dr. Knight was elected president, a position he held again the following year. When the details of the founding of the American Medical Association were complete, the first annual convention was held in Baltimore in May, 1848, with Nathaniel Chapman of Pennsylvania as President and Jonathan Knight as Vice-President. Connecticut medical men continued to be active in national medical affairs from that time to the present. In 1860 the Association met in New Haven and elected the well known and beloved Eli Ives as president.

However, local problems were not neglected. It took more than a century but eventually the unique publication "Cases and Observations; by the Medical Society of New Haven," published in 1781, led, after many vicissitudes, to the establishment of the CONNECTICUT STATE MEDICAL JOURNAL in the thirties of this century. More than a decade has established this publication as one of the outstanding state journals. The indefatigable labors and intelligent direction of Dr. Stanley B. Weld and Dr. Herbert Thoms are responsible for this unique achievement.

Public relations between the doctor and the community were from the beginning discussed in lively fashion. Some of these arguments ended in legislative acts of lasting value. It is possible here to record only a few of the more obvious. The Articles of Union between the Society and Yale College remained in force until 1884. After this period degrees in course were awarded by the Yale School of Medicine while licensing, heretofore controlled by the Society, was relinquished to the State. In 1893, the legislature, accepting a recommendation of the Society, passed a Medical Practice Act. This was revised further in 1924, following the revelations of the Diploma Mill Scandal.

As early as 1873, H. A. Carrington proposed to the Society that a State Board of Health be established. This was accomplished in 1878, justifying completely its creation. To this category of successful movements must be added the erection of State Hospitals for the insane—first at Middletown and later in other communities; the passage of the Pure Food bill; the revision of its charter in 1904 and the change of the corporate name to the "Connecticut State Medical Society."

Of course not all the discussions have ended in united action. Counter prescribing, expert medical testimony in law courts, voluntary versus compulsory health insurance, socialized medicine and medical economics generally have engaged the attention both officially and privately of members of the Society for many years. General and widespread expression of informed opinion has proved an excellent technique for solving problems of human relations, and the State Society has wisely fostered discussion at all times.

Time consuming as this is, the net result is eminently satisfactory, as this brief survey records. But it must not be forgotten that leadership is a prime requisite. When this is lacking, a Babel of tongues results. It is here, more than anywhere else, that the State Society has been most fortunate. The names of the great during the first century are known to all of us. The great of our own generation are known to us personally. We salute them as they carry the distinguished tradition of the Connecticut State Medical Society into the hurly-burly of our modern age.

American Medical Association
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For more information on how to register, call **800 626-3211** and **ask for the Department of Organized Medical Staff Services** or e-mail us at **omss@ama-assn.org**.

* Must be an AMA member

American Medical Association
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FROM THE EDITOR'S DESK

Matters of Life and Death

Recently, those who serve on bioethics committees for health-care institutions in Connecticut were approached through the Connecticut Hospital Association (CHA) to give some serious thought to the issue of End-of-Life Care. With support from the Robert Wood Johnson Foundation, the AMA and the American Hospital Association (AHA) have designed a program entitled Education for Physicians in End-of Life-Care (EPEC). With apologies for the literary flippancy, this could be an EPEC of epic proportions for our epoch.

Our epoch in medicine has been marked by myriad changes in practice and capability to prolong life through science and technology. While support systems in the care of the critically ill are designed to prolong meaningful life, their application on a "can do, will do" basis has resulted, at times, in prolongation of the dying process in a depersonalized environment with patients detached from loved ones. More than half of the deaths in this country now take place in hospitals, many in intensive care units, a sharp contrast with the death-at-home culture of a generation ago. Surely, none of us, and none of our patients now living productive, interactive lives after acute myocardial infarction, acute respiratory illness, sepsis from correctable cause, or major trauma would argue for an abandonment of the drugs and technology that have made "medical saves" possible. No, there should be no campaign to turn back the clock or the calendar to a less complex medical epoch as a means of avoiding what many critics of the process may label, usually in retrospect, as inappropriate applications of critical care technologies.

I number among my closest friends physicians and nurses whose professional focus, day after day, is on critically ill patients. They are not cold, methodical "techies" reading computer data, turning dials, and pushing drugs. In fact, to the contrary, they are compassionate, sensitive individuals striving to preserve their humanness and respect for persons in an often trying and difficult milieu. As they apply life-preserving methodologies to our critically ill patients, the best of them engage in dialogue with patients and families on the value of life-prolonging treatments. Soon apparent in many cases is an awareness that little, if any, previous discussion has taken place between the responsible physician and the patient, the family, or loved ones. While this might be appropriate in the first hours after a teenage bicyclist is run down by a motor vehicle and clings to life on a ventilator in an ICU, it should not be deemed an appropriate scenario in the case of an elderly person with long-declining cardiac function who enters a unit in cardiogenic shock.

What accounts for the apparent paucity of discussion that might prepare patient and family (and hospital staff) for wiser use of medicine's miracles and earlier attention to merging medical prognosis with the patient's values as life's end approaches? All who address this issue offer their reasons and, collectively, those reasons could construct a treatise on medical sociology. It is said that physicians, particularly specialists responsible for hospitalized patients these days, tend to emphasize signs, symptoms, diagnosis, and treatment in their discussions while avoiding the more sensitive values-laden language that might elicit from patients and loved ones key guiding commentary for later reference. When physicians do enter the more sensitive zone, some observers, like ethicist Erich Loewy, claim that we "hide behind optimistic platitudes, half truths and self-delusion or outright lies."[1]

Some facts do support the criticisms. For example, postmortem examinations are now conducted on fewer than 10% of hospital deaths despite their role in educating the care team and family, and despite their acknowledged quality of care monitoring value. Upon exploring this deficiency in hospitals, some advocates have concluded that doctors have stopped asking surviving family members for permission to perform an autopsy. Numerous reasons are given: fear of legal retribution if pathology evidence is incriminating, the belief that current diagnostic studies render postmortem examination superfluous, cross-coverage systems among physicians that leave the task of gaining permission to a doctor unfamiliar with the case, and house staff untrained and unfamiliar with the difficult task of conversing with grieving loved ones. Certainly some of us have observed rounds by resident teams excluding the room with the terminal patient, campaigning for the patient to be off-service because the educational value is so limited. It would be no surprise, given these acts of exclusion, that physicians in training might lack communication skills suited to dying patients and their families.

All these and others may be valid partial explanations but one thread of criticism weaves through them all. In a scientific age in which cure is expected and death is regarded as medical failure, doctors have become uncomfortable

Continued on next page

with the entire subject of death when compared with their forebears of a generation or two ago. The naturalness of death for human beings has become the embarrassment of death for the doctor. Broaching the subject, especially with those not close to dying, is not done willingly.

Patients and families admire physicians for their adherence to the vitalist spiritual tenet that all life is sacred. They don't wish for us to abandon our goals of curing disease and prolonging meaningful life. However, they want us to provide opportunities for them to explore their life values with us as we offer informed guidance. When curing and duration of life are no longer meaningful, they ask that we shift our attention to the fulfillment of equally noble goals: sustaining relationships, reducing pain, and relieving suffering until there is life no more. To that end, the EPEC program with lessons in symptom control, effective communication, advance directives, pain management, depression and suicidal thinking of the terminally ill, and withdrawal of life-sustaining therapies deserves our attention and participation.

REFERENCE

1. Loewy EH: Textbook of Healthcare Ethics. New York: Plenum Press; 1996.

H. David Crombie, M.D.
Editor

Prepare Your Practice for Y2K
The Time to Act is NOW!

The "Millennium Bug," has serious implications for practically every area of your medical practice from finance to practice management to patient care.

IGNORING problems could even lead to civil or criminal liability. While you can't control every possible Y2K problem, you need an action plan for the most likely ones. Steps you should take include:

Step 1.—Inventorying any equipment that might be date-dependent.

Step 2.—Conducting tests to make sure that any systems that contain date-sensitive components will continue to work.

Step 3.—Seeking assurances *in writing* that other organizations essential to your practice (such as insurers, labs, answering service, pager company and telephone system) will also be Y2K compliant. If you are unsure, anticipate how to protect your practice from potential problems.

The AMA's Y2K Web site is an important resource. Simply log onto the CSMS website at <www.csms.org> for a direct link to the AMA.

"The Year 2000 Problem: Guidelines for Protecting Your Patients and Practice" Book

This 73-page publication discusses a vast range of clinical, legal and practical resources and information. It contains a year 2000 compliance self-assessment and more than 20 "practical tips" for physicians to apply during their own compliance process. AMA members may download the entire document from the AMA's Y2K website <http://www.ama-assn.org/not-mo/y2k/index.htm>. CSMS has copies available. To order, call the Society at (203) 865-0587. The cost of the book is $10.00, to cover shipping and handling. Make checks payable to "CSMS," and mail to 160 St. Ronan Street, New Haven, CT 06511.

Medicare and Medicaid Compliance

The Health Care Financing Administration (HCFA) has established a toll-free number for physicians providing care to Medicare and Medicaid recipients. The telephone help line is staffed 12 hours a day. To inquire, call 1-800-958-4232, or log onto their website at <www.hcfa.gov/y2k>. The assistance available relates to Medicare and/or Medicaid reimbursement only.

Doesn't Anyone Sell Reasonable Insurance Any More?

August is a terrible month for the Katz household. Ever since I closed out my Professional Corporation in July 1995, I've learned to dread the month. Because August is the month when I must shop for medical insurance. It's also the month that reminds me just what kind of a perverse business the health insurance industry has become.

During my last few years in practice, I had carried medical insurance with PHS through my one-person corporation. In the last year, "the group" was a group of one, but PHS thought that was just fine. They took my $7,800.00 or thereabouts without complaint. The PC paid the bill and took the tax deduction, and the Katz's got their care, with no deductibles, and no copays.

Then I closed the practice. "OK," said PHS. "The COBRA law requires us to cover you. So we'll raise your premium by 10%, and add a bunch of deductibles, restrictions, and copays to your coverage. But at the end of COBRA, you're out of here. We don't cover individuals."

"You mean that you'll insure me as a group of one, but not as an individual of one?" I asked. The reply, of course was, "Yes." Connecticut law allows that nonsense. After all, we're "The Insurance State."

So I went insurance shopping. The shopping reached a climax when a company that claims it willingly insures individuals declared me uninsurable. I promptly took those folks to the Insurance Commissioner's offfice. You see, I hadn't told them I was a doctor. So when the rejection "explanation" arrived in the mail I knew that their medical underwriting was nonsensical if, in fact, it existed at all. After two letters from the Commissioner's offfice, the company "re-evaluated" my case, and found me insurable after all! For about $6,500.00 per year. But only those parts of my body that had never been exhibited to a physician! (I think that my toes qualified.) Concomitantly, they now also concluded that my healthy and previously insurable wife and 15-year-old daughter were now too decrepit to cover! Logic didn't matter, of course. All that mattered was that they had met the Commissioner's order to offer me a policy!

We finally managed to find a so-called "Comprehensive Medical Expense" plan. The plan was so "comprehensive" that it had a $10,000 deductible before it would pay 80% of incurred expenses! But at least it would keep us from bankruptcy. And with a premium of $2,471.00 per year the price was, well, not totally outrageous.

But all good things must come to an end. It seems that insurance companies have declared indemnity coverage to be expendable. So the premium of our "comprehensive" policy rose by leaps and bounds each year. Finally, in August 1999, we were notified that for the fourth anniversary renewal of the policy the premium would climb to $8,288.00, or 335% of the 1995 premium. It was time to shop again. Had things changed?

Yes, things had changed. For the worse. It seems that society has forgotten that insurance is supposed to be something for which we each pay a little so that the few unfortunate folk who have to face catastrophic medical problems can do so without winding up in bankruptcy. What passes for health insurance nowadays is, in fact, no longer insurance at all. It is for-profit, prepaid health care. A very different product, with a far higher cost. And a wasteful cost for many of us. Worst of all it is, for all practicable purposes, obtainable only through an employer! Thanks to the efforts of policy-makers and politicians, our society has been proletarianized. No work, no insurance! Of course, such a policy guarantees to the government a constant flow of payroll and income tax. A lawmaker's dream! And by doing things through the employer, the bloated costs of for-profit insurance coverage are hidden from view by the fiction of employer payment of premiums. No one stops to realize that the employer is spending our money, not his! You see, we have been declared not only proletarian, but *non compos mentis* when it comes to choosing medical insurance coverage.

What did our insurance shopping uncover for us this time? To summarize,

Continued on next page

- no company offers good, old fashioned "hospitalization insurance" with a reasonable deductible;
- two companies rejected us without even proffering an application after we answered the broker's preliminary question, "Have you seen a doctor for any illness at all in the past year?" in the affrmative;
- the cherry-picker I described earlier is still picking their cherries AND underwriting with a vengeance. Their underwriting list has grown to ridiculous length. And if you do qualify, they require you to buy the "whole value package," as they would characterize it—doctor office visit coverage (within their "network," of course), lab coverage, drug rider, as well as a hospitalization benefit and anything else they can profitably bundle in—all with "pre-existing illness" exclusion clauses, of course;
- one company has started to offer an "individual HMO product." Again, you are required to buy the whole package —no modules or riders to pick and choose from. And they don't underwrite, they just cherry-pick. A straightforward yes or no. "If you've been sick then they don't pick!" is what I suspect Johnny Cochran would say about it.

By the time you read this, our prior "Comprehensive Medical Expense Plan" provider may have come to our rescue by providing us with a $20,000 deductible policy—yes, that was TWENTY THOUSAND DOLLARS—from a new insurance carrier for "only $1,100 per year." We wonder how long it will take them to raise this premium to unreasonable levels. Of course, there is a catch. The first significant illness of my life, which occurred this past June, will not be covered!

Clearly, our "system" needs revision. We need to return to primary reliance on individually purchased and owned health insurance. Not employer-purchased plans. Not maximally priced, unnecessary, and excessive coverage for healthy workers only. Not coverage that 93% of the workers will never access for anything other than minimal, mundane care at a hidden but excessive cost!

We've got to re-teach and re-emphasize the value of limiting the use of insurance to it's proper domain, namely, coverage for catastrophic situations. We've got to relearn the value of buying family-tailored insurance through the purchase of optional riders, not unusable, overpriced, "comprehensive packages."

But it seems that for now at least, Corporate America has discovered that there's too much money to be made in prepaid health care. So much money, in fact, that it's not worth bothering with real insurance any more. At least not until the current employment bubble bursts. Then the current scheme will collapse overnight, like a house of cards.

But until then, won't anyone sell us reasonable insurance?

"Something is rotten in the Insurance State of Connecticut."— with apologies to Wm. Shakespeare

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Stephen R. Katz, M.D.,
President

Minority Health

RESOURCES

The Connecticut Department of Public Health (CT DPH) released a report in June, 1999 entitled Multicultural Health—The Health Status of Minority Groups in Connecticut. The report compares the health status of African American, Hispanic, Asian American and Pacific Islander, and Native American to white residents, in the context of socioeconomic differences that affect health and access to health care.

Thirty-four areas of health disparities for Connecticut's minority residents are examined. The findings are expressed as population-based rates, relative risks compared to whites, and excess events that would not have occurred if the minority group had the same rate or percentage as the white population. For a free copy of the report, call the CT DPH Office of Multicultural Affairs (860) 509-7140 or e-mail <webmaster.dph@po.state.ct.us>.

REFLECTIONS ON MEDICINE

Commercialized, Assembly Line Medicine

ROBERT U. MASSEY, M.D.

> The treatment of disease may be entirely impersonal;
> the care of a patient must be completely personal.
> Francis Weld Peabody.

MOST of us at one time or another have read *Doctor and Patient*, but it is cheering occasionally to reread these three essays by Francis Peabody, a professor of medicine at Harvard, written almost 73 years ago.[1] Peabody referred to a Reformation in medicine that occurred during the generation of physicians before him, the giants of the 19th and early 20th century. That was an era, in his words, "characterized by scientific progress in all directions." From 1921 until his death in 1927, Peabody was Chief of the Fourth Medical Service and Director of the Thorndike Memorial Laboratory at Boston City Hospital. His concern even then was that the new doctors would see themselves and be seen more as scientists than as healers. He wrote,

> With the exception of the relationship that one may have with a member of one's family, or with the priest, there is no human bond that is closer than that between physician and patient (or the patient's family), and attempts to substitute the methods of *machine or organization* (italics mine), be they ever so efficient, are bound to fail.

And fail they have, or so it seems. Several weeks ago a healthy young married woman, a music teacher, called me. She had experienced a sudden onset of right lower quadrant pain that quickly extended to her right subcostal region and that was exacerbated by deep breathing. Vomiting followed within a few minutes following the onset of pain, and after 12 hours with no relief, she called her internist and gave him a more complete history than I have reported here; he suggested she might have ruptured an ovarian cyst, or worse, and arranged for her to see a gynecologist in his HMO within two hours.

The gynecologist's nurse took a cursory history, including questions about smoking, drinking, and "recreational" drugs. Her answers were negative to all of these; she had never smoked, never used alcohol, except for an occasional sip of wine, and no drugs. Her last period had occurred 12 days before. After meeting the gynecologist his first words, without looking up or making eye contact, were,

"You know you've got to clean up your act."

"What do you mean?"

"You're not to smoke or use alcohol or drugs if you're pregnant."

"I've already told the nurse I'm not pregnant so far as I know, and have never used drugs or alcohol or smoked."

His examination, a rough and painful one she told me, was completed without any further attempt at a history. When he finished, he commented, "It's probably an ovarian cyst—ruptured. Don't forget to clean up your act."

Total time elapsed after entering the office—about 12 minutes, including the nurse's history taking.

Perhaps the doctor was tired and had a headache, had been up all night with two deliveries, had fought with his wife, and this morning his stupid car battery was dead. This intruding patient was an unknown, an "extra" shoved in during a lousy morning. Perhaps he was only taking out his rage at the damned HMO and his patient got the brunt of it. Maybe he was only one in a hundred, a singularity, but from what my friends and neighbors too often tell me, I don't believe it. But of course no reasons will quite do. We have all heard stories like this too many times.

The rude, uncaring physician is hardly a newcomer in either life or in fiction, and we all of us have had patients for whom our best efforts seem never enough. Recall the almost two thousand year old story in St. Mark's Gospel: "And a certain woman, which had an issue of blood for twelve years, and had suffered many things of many physicians, and had spent all that she had, and was nothing bettered, but rather grew worse."

The 10-minute visit seems to have become, in the world of managed care, the ideal, a focused encounter, modeled on the assembly line—or on sick-call, as I recall it from my army days—efficient, business-like, often good enough though unprofessional and unsatisfying to both doctor and patient. But when the sole motive of the physician's

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ROBERT U. MASSEY, M.D., Professor Emeritus, Division of Humanistic Studies, Department of Community Medicine and Health Care, University of Connecticut School of Medicine, Farmington.

masters is profit, and the physician's fear of being dropped from the HMO is real, fast through-put is critical. Like the check-out counter in the supermarket where often the only civil words are "Have a nice day," the equivalent for the clinic's check-out counter may be "Clean up your act!" So much for health maintenance.

We have all heard, and some of us in euphoric moments may even have said, that ours is the best medical care in the world. That assertion would be hard to prove; clearly we have the most expensive medical care in the world serving most, but by no means all, of our 280 million people. And now our students are to be trained in the arts of managed care.

Recently Frederic W. Hafferty wrote in *Academic Medicine*:[2]

> Managed care companies ... have not been silent on the topic of medical education. They insist that medical students are not being trained to practice medicine in a managed care environment and that it takes physicians upwards of two years of employment ... to acquire the knowledge, skills, and value orientations demanded of them by providers.[1]

What do you suppose those "value orientations" are? Profit is the goal, compete by any means at your disposal, time is money, stock holders' interests must come first.

Medical education may not escape this brave new world. Academic health centers have become academic health systems, mimicking their commercialized counterparts. Hafferty asks "where is the medical school?"

> Imagine, just for a second, that your new state senator—uninvited and unannounced—decides to visit "the medical school" Where would she go? The dean's office? The student lounge?... Where would she be sent—and by whom (an employee of the AHC or perhaps one hired by the managed care company that now owns the teaching hospital)? In the end, what impression would she come away with as to the core "business" of the academic health center?

When I was a student at the University of Michigan in Ann Arbor in the early 1940s, I recall an aging, classical gray building on the main campus, and over the impressive portal in fine Roman capitals: MEDICAL SCHOOL. No doubt about the "business" in that place. Hafferty concludes:

> For decades, organized medical education has marqueed the claim that it produces physicians who are not only knowledgeable and skillful but also caring, trustworthy, and altruistic. The trouble is, short of pointing to test scores or to rates of "adverse events," organized medical education has not been able to document the presence and impact of this critical third leg.... In turn, organized medical education must place these core competences at the very epicenter of the training process. Anything less and organized medicine will have acknowledged to its critics that it has abandoned its social contract and entered the temple of those who clamor, "I can do it faster, cheaper, and better; I can name that tune in four notes."

The medical world of the 1920s may hardly have been Utopia, but I have a hunch that the idealism of our profession was then near the top of its form. The Flexner reformation clearly had victory in sight, and progress was perceived as nearly always good. Even then some of the finest medical scientists expressed their uneasiness that their science, and maybe even "socialized medicine" would displace the other values in medicine; Francis Weld Peabody was one of these. Here is how he concluded his admonition in "The Care of the Patient":

> The good physician knows his patients through and through, and his knowledge is bought dearly. Time, sympathy, and understanding must be lavishly dispensed, but the reward is to be found in that personal bond which forms the greatest satisfaction of the practice of medicine. One of the essential qualities of the clinician is interest in humanity, for the secret of the care of the patient is in caring for the patient.

Anything we can do legally to embarrass, confuse, discredit, or convince the giant commercial interests that messing around in medical care is bound to be uncomfortable, ungratifying, and unprofitable should be done. More than that, we need to offer some serious and workable solutions to the problems that they have been trying to solve by the only means they know. Not a few of those problems have been of our own making; we need to get back to the basics.

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1. Peabody FW: *Doctor and Patient: Papers on the Relationship of the Physician to Men and Institutions.* New York: The Macmillan Company; 1930.
2. Hafferty FW: Managed medical education? *Acad Med* 1999; 74: 972–9.

MEDICAL NEWS CAPSULES

This Month's Reading in Review

TIMOTHY B. NORBECK

Attempting to frame the patients' rights debate around the public's dislike of lawyers, the American Association of Health Plans (AAHP) announced a television, print, and direct mail campaign portraying a dichotomy between helping trial lawyers and helping "working Americans." ... In one TV ad, the narrator says: "They call that patient protection. But you know who they're really protecting." ... Another one pounds that same theme: "More than 40 million Americans already have no health insurance. Making it even more expensive is the wrong way to go. But that's what the Dingell-Norwood trial lawyer protection act would do."

Congress Daily (19 August 1999)

"We find it difficult to comprehend how the politics of greed can drive insurance executives to work to kill fundamental protections that members of their own families will need when they themselves require health care."

AMA President Tom Reardon, M.D.,
responding to the AAHP's propaganda campaign
intended to scare patients and intimidate members
of Congress. *AMA Release* (23 August 1999)

The HMO lobby is annoying some moderate Republicans by calling the Dingell-Norwood bipartisan patients' rights legislation "The Trial Lawyer Protection Act." ... Arizona Representative John Shadegg, coauthor of a GOP bill, warns the ad will "confirm the widespread sentiment" that "the insurance industry's primary motivation is profit."

Wall Street Journal (27 August 1999)

At least 92 restaurants in Luoyang, China, were shut down in August after they had been found by government inspectors to have been inserting opium pods and seeds into their dishes to addict customers to their food.... Almost one ton of pods and seeds were confiscated.... Officials became suspicious when they saw long lines of people waiting to get into some restaurants while neighboring restaurants were empty!

Forbes (14 June 1999)

"You can choose either kidney. Buyer pays all transplant and medical costs. Of course, only one is for sale, as I need the other to live."

"hchero," who attempted to auction his own
kidney on the eBay Web site.
Business Week (20 September 1999)

Editor's Note: Bidding for the kidney reached $5.7 million before executives at Internet auction house eBay pulled the illegal posting. Selling human organs is illegal in the United States and is punishable by up to five years in prison or a $50,000 fine.

"I think Congress no longer represents the majority of Americans. Congress represents special interests and itself. It's an elite ruling class."

U.S. representative and physician Tom Coburn
(R-OK), who will leave Congress next year after
three terms. Disillusioned, he said, "A lot of
people will be happy when I leave."
Wall Street Journal (10 September 1999)

A new poll from *ABC News/Washington Post* finds the public at odds with Congress when it comes to assigning top priorities for the fall domestic agendas.... Given a choice between using the budget surplus to support a tax cut or to increase spending on "education or health care," 37% preferred more health and education while only 14% of those surveyed preferred a tax cut.... Whereas Congress has prioritized campaign finance reform and tax cuts, most Americans would prefer a focus on Medicare, patients' rights and Social Security.... Specifically, Social Security protection is the highest priority for 82% of survey respondents, while 80% and 79% of participants hold Medicare and patients' rights highly important, respectively.... And whereas lawmakers have prioritized gun control, tax cuts and boosts in military spending, the poll shows survey respondents relegate those issues to the bottom of their own agendas—only 55%, 53%, and 37% of participants consider them of high importance, respectively.

Washington Post (10 September 1999)

Only in America: The Reichert family of Battle Creek, Mich., says that when the city tore down an abandoned house, they damaged their family bomb shelter next door.... The underground shelter, built in 1958 at a cost of $80,000, was heavily damaged, they say.... Their attorney says the Reicherts now "have nowhere to go to survive" in case of nuclear attack or any other "type of situation," and may file a lawsuit if the city doesn't pay $6 million in damages. **NOTE:** If the shelter couldn't withstand a bulldozer, how effective could it have been in a nuclear attack?

UPI (14 July 1999)

TIMOTHY B. NORBECK, Executive Director, Connecticut State Medical Society, New Haven.

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From the Executive Director's Office

COUNCIL MEETING

Thursday, 26 August 1999

Attendance

In addition to the Chair, Dr. Hollister, were Drs. Ahamed, Beck, Brooks, Deren, Galvin, Geary, Goodrich, Katz, Keating, Scarpa, Timmerman, Van Linda, and Wetstone.

Also present were Mr. Norbeck, Ms. Lindquist, Mr. Brunell, Ms. Morelli, and Ms. Norbeck (all CSMS staff), Mr. Thompson and Laura Phillips (FCMS staff), Mr. Coffey (HCMA and NHCMA staff), Mr. A. Schuman and Mr. M. Schuman (NLCMA, WCMA, MCMA, TCMA staff), Dr. Genel (CURE), Dr. Thompson and Mr. Lalime, (CSMS-IPA).

Absent were Drs. Aleali, Bigos, Conant, Bobruff, C. Czarsty, J. Czarsty, Eslami, Franklin, Geist, Handelman, Herzog, Montegut, Maloney, Mansourian, Sadowski, Schwartz, Sindwani, Sosa, Sridhar, Tesoro, Turner, and Wong.

Reports

CSMS-IPA: Mr. Ken Lalime, Executive Director of the CSMS-IPA, referred to the question asked by the Council at its June 30 meeting to have the Board of the IPA waive its requirements for IPA membership so that the current president of CSMS could sit as a Board member. It was reported that the request was approved by the IPA Board and the letter to Dr. Hollister outlining its approval was included with the agenda for this meeting.

Mr. Lalime reported that the document by Dr. Katz regarding IPA activities that was distributed to the Council at the last meeting had been answered. A copy of the letter addressing the issues raised was mailed to Dr. Hollister and, at Dr. Hollister's request, mailed to all members of the Council on July 9. He reported that since no further questions were raised, no further comments were necessary.

The Board of the IPA is being informed that there are a variety of issues that have been under negotiation with PHS over the last four or five months that are not being addressed to the satisfaction of the Board. They are being pursued with executive committee and Board approval to pursue those means necessary to secure the IPA position on these issues. Information will be brought to the Council on these matters if, in fact, they remain unresolved.

Mr. Lalime reported that at the August Finance Committee, reports presented did not meet expectations. They have been working with PHS over the past eight months in an attempt to have Primergy assume a much more active role in the financial reporting for the IPA, so that they can be more secure in assessing the numbers being received from PHS.

Mr. Lalime stated that there is no additional information to the report made to the Council at its last meeting concerning the lawsuit filed against Foundation Health Systems, PHS, and the IPA by a group of physicians in Fairfield County. The attorneys for all parties have been actively working to resolve the issue.

The IPA is continuing to work hard to ensure that physicians within the IPA and providers contracting with the IPA are being paid accurately by the Plan. It appears that the process is improving dramatically, and regular payments have been going out in the range of a two- and three-week turnaround time, which is much better than it has been in the past. An active participatory process is being carried on with the Fairfield County Medical Association and with some of the physicians in that area who have had problems with accounts receivable. The IPA is actively going in and identifying a number of groups, and walking through some of the problems. There has been a great deal of change due to the IPA monitoring of the process. The IPA strongly urged that PHS pay current claims in a timely fashion and also concentrate on the backlog that exists for about 8% of the claims.

Dr. Thompson reported that there has been a change in personnel which has improved the turnaround time on claims, and better communication between the IPA and PHS.

Introduction of the New Councilor

Dr. Hollister introduced Dr. J. Robert Galvin, Jr., the new councilor for Hartford County.

Report of the President

Dr. Katz reported on the following issues:

1. On July 30, Drs. Wetstone, Beck, Katz, Tim Norbeck, and Cam Staples went to the UConn Medical Center and presented a seminar about the activities of organized medicine in general, and the CSMS in particular, to the Medical Center's summer fellow-

ship program. At the last Council meeting, the Council voted to endow four of these fellowships for the next three years. Our informal presentation was met with enthusiasm on the part of the students. There was also an opportunity to listen to two of their research presentations. In summary, CSMS's money is being well spent in this program and the Society can be proud of its sponsorship.

2. CSMS has been requested to make nominations to the AMA Ad Hoc Task Force on E&M Documentation System. The names of Dr. Stephen Levinson and Dr. John Bigos have been submitted. CSMS has also received a request from the AMA to submit nominees to the AMA National Negotiations Organization. All members of the Council were notified of this request. Based on input received, the names of Drs. Fred Montegut, Scott Gray, and Michael Connair were submitted to the AMA.
3. The CSMS Managed Care Patient Advocacy Committee, under the chairmanship of Dr. Donald Timmerman, has been activated. Following the initial committee meeting, Tim Norbeck was invited to attend a dinner meeting with the medical directors of six managed care companies. (A copy of his report on the meeting was distributed to council members.) A letter has also been received from Dr. Ronald Rozett, Medical Director of MedSpan and a member of the "Connecticut Managed Care Organization Medical Directors Group," asking that CSMS select three or four representatives to meet with a similar number of medical directors "to begin a dialogue between our organizations focused on the general issues of managed care." Dr. Katz requested the Council to approve a motion allowing Dr. Timmerman, as Chairman of the Managed Care Patient Advocacy Committee, to establish a delegation and to arrange such a meeting or meetings in order to begin such a dialogue and to report back to the Council on progress as he feels is appropriate. The Council VOTED to approve the motion.
4. Dr. Katz reported that he met with a group of CSMS past and future presidents (Drs. Czarsty, Herzog and Timmerman) to discuss the questions of setting up meetings of the presidents, presidents-elect, and executive directors of the county associations and of the state society. He noted the physician membership is looking for maximum services from all of the organizations to which they belong. Perhaps such meetings will help to refine "who does what best" and will help to determine the necessity for future county-state get-togethers.
5. Dr. Katz invited Dr. Jack Fong, a pediatrician and pediatric immunologist, and the chairman of the Department of Pediatrics at Danbury Hospital, to speak about mandatory prenatal HIV testing. Dr. Katz made several recommendations on the subject and the action taken on these recommendations are reported following Dr. Fong's presentation.

Report of the Executive Director

Mr. Norbeck reported on the following items:

1. Managed Care Reform Bill: The U.S. Senate passed a managed care reform bill on July 15, so tepid and mild that it could be named the HMO Protection Act. After the vote, it appeared that House Speaker Hastert and the Republicans would rally together and sign on to the Senate bill. However, five of the six Republican physician House members told Speaker Hastert, along with Georgia dentist, Charlie Norwood, that they were not going to accept the watered down Senate version. Since Speaker Hastert has only a five Republican majority in the House, he had to back down from his plan to pass the Senate version in the House before the August recess, and real managed care reform will be on the docket for September.
2. Patients' Bill of Rights: The AMA has announced its support of the bipartisan Norwood-Dingell patients' right bill-HR 2723. This bill would allow for patients to sue HMOs in state courts, guarantee access to specialists, let patients get physician referrals outside their networks and allow physicians rather then HMOs to determine "medical necessity." The measure has more than 60 Republican and Democratic members of the House as cosponsors. Referring to the Norwood-Dingell bill as"Dingwood," the Health Insurance Association of America (HIAA) and American Association of Health Plans announced a major TV ad campaign against it, particularly in the districts of those legislators who sponsored the legislation. John Cooksey, M.D., one of the Republican physicians who supports the Norwood-Dingell effort, says that the insurance and business lobbying effort against managed care reform is the most aggressive and ruthless lobbying that he has ever seen in Washington. The insurer-business coalition effort against the Norwood-Dingell bill will focus on the public discontent toward lawyers. The ads will highlight the profits trial lawyers will allegedly reap if patients are allowed to sue HMOs. The only physician in the U.S. Senate is the Tennessee Republican, Bill Frist, M.D. He has been strangely mute on the need for managed care reform but apparently is trying to position himself as a Presidential candidate down the road.
3. Presidential hopeful, former N.J. Senator Bill Bradley, will probably come out with a major health care

proposal in the near future. That will force the Vice President to respond with his own ideas on the subject, which will in turn force the Republican candidates to deal with the issues.

4. The Democrats and President Clinton believe that the Medicare issue is one that favors them, and the new Clinton Medicare proposal hopes to exploit it at the expense of Republicans. Clinton's proposal, Part D, would be phased in over six years, starting in 2002. The federal government would subsidize half of an individual's drug expense up to a $1,000 maximum with the cap increasing to $2,500 in 2008. Beneficiaries, except for low income seniors, would pay $24 a month, which would rise to $44 as coverage increases. It will be an interesting debate this fall.

Committee on Medical Aspects of Sports

It was VOTED to add Jeffrey M. Anderson, M.D., team physician at UConn, to the Committee on Medical Aspects of Sports.

Miscellaneous

There was a hiatus in the meeting awaiting the appearance of Dr. Fong, who was to speak to the Council. Dr. Hollister threw the floor open for discussion. There were miscellaneous comments about county-state relationships which were addressed by various members of the Council. It was suggested that county and CSMS staff individuals should meet more often and discuss issues of mutual interest and bring each other up to date on what is being done at the various levels. The President of the Society, at a previous Council meeting, suggested that a meeting be held of county and state officers and that meeting was scheduled for September 29. Dr. Hollister suggested that Dr. Katz and Dr. Timmerman discuss some of the issues raised at the forthcoming meeting.

Universal HIV Testing

Dr. Katz introduced Dr. Jack Fong, Chairman of the Department of Pediatrics at Danbury Hospital, and Dr. Jerry Foye, obstetrician and gynecologist at Danbury Hospital and also a perinatologist. Distributed with the agenda were letters from Dr. Katz and Dr. Fong, Public Act 99-2 dealing with this subject, articles from the American Academy of Pediatrics and from *Newsweek,* and previous actions of the Council on the issue. Dr. Fong distributed statistical information on newborns and HIV infections, and a Joint Statement of the American Academy of Pediatrics and the American College of Obstetricians and Gynecologists.

Drs. Fong and Foye presented a comprehensive review of the data included in the documents presented. The following motions were made:

1. That the Connecticut State Medical Society endorse the joint statement of the American Academy of Pediatrics and American College of Obstetricians and Gynecologists (AAP/ACOG) regarding universal maternal prenatal testing for HIV. (Joint statement is attached to these minutes.)
2. That the Connecticut State Medical Society notify the governor and legislative leadership of CSMS endorsement of this policy and of the need to change state law on this subject.
3. That the Connecticut State Medical Society instruct the CSMS legislative committee to do whatever is necessary to get the law regarding prenatal HIV testing revised.
4. That this policy should also assess the implications of Public Act 99-2 on other newborn screening.

It was VOTED to approve all four motions.

Dates of Future Meetings

Council Meeting—13 October 1999

Semi-Annual Meeting—House of Delegates
Wednesday, 17 November 1999

Annual Meeting—House of Delegates
Wednesday, 10 May 2000

Semi-Annual Meeting—House of Delegates
Wednesday, 15 November 2000

Aetna is playing doctor with our patients.

Doctors whose patients are covered by Aetna/US Healthcare must treat them the cheapest way. That's what Aetna's contract requires—"the least costly"alternative.

Sometimes, that's fine. But sometimes another treatment would be better. Or have fewer side effects. But we can't use it.

Same thing when it comes to access to specialists and hospital care. We'd like to be able to send you for treatment whenever we judge it necessary, without fear of being punished by Aetna. That's why doctors go to medical school.

Ironically, we can't even be sure the guidelines of our agreement with Aetna won't be changed right under our feet. Aetna can do that —without asking us—without asking you.

Why should you care? Because it can limit your treatment options. What's acceptable this month may not be the next.

We'd like to work with Aetna and other health insurers to work out our differences. After all, quality patient care should be a vital issue to everyone.

But just as vital is how to improve the health care system on all fronts so it works better for everyone.

We believe the answer lies in one simple question.

It's a question that can quickly bring focus to the debate. It can establish common ground. And be an invaluable guide in designing effective new proposals, be they local, corporate, or national.

Conclusion? Whenever health care is the issue, this should be the only real question: **Is it good medicine?**

Connecticut
State Medical Society
FOUNDED IN 1792

American Medical Association
Physicians dedicated to the health of America

Find out what physicians of the CSMS and AMA say on issues important to you and your doctor at www.csms.org and www.ama-assn.org.

News from Attorney General Richard Blumenthal

Office of the Attorney General. 55 Elm Street, Hartford, Connecticut 06106

ATTORNEY GENERAL TO INVESTIGATE NEW AETNA/US HEALTHCARE CONTRACT WITH PHYSICIANS THAT MAY AFFECT PATIENT CARE

Attorney General Richard Blumenthal announced on Wednesday, September 29, an investigation into a new contract Aetna/US Healthcare is requiring physicians to sign that may impose terms that compromise patient care.

"The corporate bottom line shouldn't undercut the quality of medical care," Blumenthal said. "This new Aetna policy raises the specter of assembly-line medical care at the lowest common denominator. It potentially pits doctor against patient by imposing a system of rewards and punishment that hinder adequate advice and treatment. The result may be cutting health care corners to cut costs, and so imperiling lives."

At a news conference with representatives of the Connecticut State Medical Society, Blumenthal said the Attorney General's Office would be reviewing the new contract.

"Enough is enough! Patients and physicians are fed up with Aetna's bullying and coercive contracts that limit and control the options available to physicians in treating their patients," said Tim Norbeck, Executive Director of the Connecticut State Medical Society. "Aetna's 'all products' clause, which forces physicians and other caregivers into participating in all Aetna plans—or none of them—threatens patient access to their physicians."

Specifically, the investigation would review several aspects of the contract, including:

o The "all-products clause," which requires physicians to participate in all Aetna plans and products offered by Aetna, including those in the future;

o The imposition of quality standards that are based on "average utilization rates" rather than objective criteria. So, if the physician refers patients to specialists or for additional testing more than the average physician, the compensation may be decreased;

o Strong disincentives to physicians referring patients to an out-of-network physician.

"My office will review this contract thoroughly to ensure that patient care remains the priority over corporate profits and expediency," Blumenthal said. "The Medical Society has raised some very serious issues that need to be explored. In the meantime, my hope is Aetna will rethink its decision."

The investigation will be carried out under a variety of federal and state statutes, including the Connecticut Unfair Trade Practices Act, the Connecticut Unfair Insurance Practices Act and Employee Retirement Income Security Act (ERISA).

The Attorney General also reiterated his call for legislation that would clarify the duty of managed care organizations to act responsibly toward patients and physicians. Blumenthal previously has proposed health-care fraud legislation that would define fraudulent behavior by managed care organizations and would give the Attorney General's Office greater authority to pursue such cases. The Attorney General also proposed legislation to hold HMOs liable for negligent acts that harm patients.

"When physicians are forced to leave the plan, patients must find another physician. Aetna's response to the patient is to find a new physician on the Internet!" Norbeck said. "More and more patients in Connecticut and throughout the country feel like commodities to be auctioned off to the lowest bidder."

"I am very concerned that doctors are being pressured to give patients less care and inadequate advice as a result of abusive and coercive contract provisions imposed by managed care organizations," Blumenthal said.

Comments from CSMS at the Attorney General's News Conference

Enough is enough! Patients and physicians are fed up with Aetna's bullying and coercive contracts intended to limit and control the options available to physicians in treating their patients. For instance, using the "least costly" alternative, or limiting access to specialists and hospital care is designed for Aetna's benefit, not the patient's. So is their right to change the contract guidelines, anytime.

Aetna's "all products" clause forces physicians and other caregivers to participate in *all* Aetna plans—or none at all. Some of these Aetna plans come with perverse incentives like capitation, by which doctors get more income, if they take care of their patients *less*, and vice-versa. This not only can challenge medical ethics; it also undermines the patients' access to their own physicians.

(continued on page 636)

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BOOK REVIEWS

The Business Side of Medicine

By Ronald P. Kaufman, M.D., FACPE
150 pp. Tampa, FL
American College of Physician Executives, 1999
$25.00. ISBN: 0-924674-72-5

Dr. Kaufman brings his extensive experience in clinical medicine, medical education, and the management of two large academic medical centers to bear on this review of the organization and financing of medical care and the elements of the managed care financing system, now providing coverage for 80 million Americans.

The exposition is descriptive, clear, and concise. The first two chapters describe the political and economic currents that contributed to rising concerns of employers and government about escalating medical costs and to the ultimate reliance on the insurance industry to control costs and manage care.

The subtitle of this small volume is "A Survival Primer for Medical Students and Residents." Residents nearing or completing their training are faced with an array of career choices: becoming an employee of an established group, a hospital, or of government or business; or entering private practice as a single practitioner or member of an existing practice. If private practice, then decisions must be made about which kind of organizational entity to join for the purpose of competing for participation in managed care contracts and seeking financial security.

Chapter 2 is a brief but extensive review of such organizational entities. IPAs, PHOs, hospital-acquired medical practices, and hospital-sponsored, captive medical groups are described and advantages and disadvantages elucidated. Dr. Kaufman reports that the majority of these arrangements lose money; that hospitals are the dominant partner; and that attempts to exercise discipline among the physician members to control costs are largely ineffective.

The law and accounting firm model, wherein the partners own and operate the business has the advantage of professional control and the ability to directly negotiate engagement contracts. The disadvantage is that partners are responsible for meeting capital needs, The medical parallels are the large clinic operations such as Mayo, Ochsner, and the Cleveland Clinic. Kaufman is a bit more sanguine about the investor model, the Physician Practice Management Company (PPMC)

In this arrangement, all nonphysician services are spun off as a medical service organization (MSO) in which physician participants can purchase stock. The MSO becomes the agency for obtaining and managing managed care contracts and for capital formation. This unit has well-organized information systems and may generate potential profits for investors via stock options. In order to participate in this arrangement, physicians must transfer their practice assets and usually sign noncompetitive agreements, making termination from such arrangements difficult.

Other initiatives described are: integrated delivery systems; and the rapid development of disease management centers for integrated care of chronic disease.

The chapter on work-force issues is primarily directed to the attention of medical students who must make career choices and choose the type of residencies they will seek early in their medical school years. Dr. Kaufman does not present an optimistic picture as he details the current and projected oversupply of physicians, especially specialists, and medical schools persistently flooding an already crowded market with 16,000 graduates yearly.

The chapter on legal issues, written by Bryan Burgess, J.D., M.P.H., is a synopsis of the legal environment of medical practice and, in particular, licensure, discipline, employment status, and physician relationships with patients, and medical staff, and administrative matters such as medical records, and malpractice issues. Medical students whose clinical rotations expose them to these issues will, no doubt, find this chapter a useful and on-going reference.

The chapter entitled "Physician Leadership for High Quality in a Competitive World" by Michael Alberts M.D., MBA provides an overview of the various mechanisms for assessing adequacy of medical care and for establishing accountability pathways for physician performance. Utilization review, quality assurance, practice guidelines, protocols and outcomes research, and management are included in this overview. Dr. Alberts discusses the differing definitions of quality from the viewpoints of institutions, payers, patients, and professionals. He classifies them into quality of service and quality of medical care definitions and makes the case for the integration of these approaches into a unified overall measure of the quality of medical care.

In a volume which repeatedly stresses the need for physicians to adapt to the market realities of managed care, this statement by Dr. Alberts is puzzling: "Like it or not, physicians of today are in the retail business. There are only two rules in retail: "the customer is always right,' and 'if the customer is wrong, refer to Rule 1.'" This analogy may have been appropriate for the medical market place of 20 years ago, but no longer seems relevant.

In the retail business customers choose and change retailers, can comparison shop, exert control over which products they purchase, and have legal recourse if sold shoddy or dangerous products. Patients of managed care businesses do not have free choice of physicians. Physicians do not charge patients. Patients do not pay physicians, and neither can determine what is medically necessary.

The customers of managed care businesses are employers, the government, and stockholders. As previously stated by Dr. Kaufman, patients and physicians are regarded as market commodities. Perhaps Dr. Alberts used this analogy as a pedagogic device to focus the attention of his students and residents on the importance of considering business issues as well as clinical issues in the practice of medicine.

This slim volume clearly succeeds in providing a useful and informative primer for medical students and residents on the business components of the current organization of medical care. Other health professionals, coping with the administrative nightmares and less than salutary outcomes attributable to the managed care system, may find this a useful and informative review.

Ralph F. Reinfrank, M.D.
Glastonbury

Comments from CSMS *continued ...*

When physicians are compelled to leave the plan, their patients must find another physician. Aetna's response to the patient?—Find another physician on the Internet!

The Nevada Insurance Commissioner has declared that the Aetna's "all-products" clause violates Nevada's Unfair Trade Practices Act—and other states are equally concerned and are considering action against this coercive practice. The wholesale bankruptcies of physician groups in California, the "Capitation State," exemplify the dead-end outcome of such policies.

More and more patients here in Connecticut and throughout the country feel that they have become mere commodities, to be auctioned off to the *lowest* bidder. That is why we have gone to Attorney General Blumenthal to seek fairness—fairness for patients and their physicians.

Timothy B. Norbeck
CSMS Executive Director

My Mother's Breast: Daughters Face Their Mothers' Cancer

by Laurie Tarkan
220 pp, notes, resources, glossary, bibliography
Dallas, Texas. Taylor Publishing Co., 1999
$14.95/paper, ISBN 0-87833-227-8

The discovery of a breast lump is a harrowing experience every woman dreads. The diagnosis of a breast malignancy begins a nightmare which not only engulfs the woman herself but her family as well. While the psychological impact of a breast cancer diagnosis on women has been the focus of extensive research and many authors, little attention has been given to the impact of this diagnosis on their daughters.

True to its stated mission, *My Mother's Breast: Daughters Face Their Mothers' Cancer* by Laurie Tarkan (Taylor Publishing Co.) chronicles the diverse and complex reactions of women to their mothers' breast cancer. Ms. Tarkan has interviewed over 70 mothers and daughters and has presented a collection of personal accounts from women who have witnessed their mothers' struggles with illness and who themselves now live with the threat of breast cancer. These accounts describe intense feelings of grief, loss, sadness, loneliness, guilt, resentment, anger, love, and hope which are heightened by the unique bond that mother and daughter share.

The expert opinions from social scientists, psychologists, and genetics counselors which are woven into various accounts validate the experience and reactions of the individual storyteller. With the exception of the brief description of Ductal carcinoma *in situ* and its implications, the scientific facts interspersed throughout this text are accurate. Perhaps the most uplifting and encouraging sections of this book are the chapters dedicated to risk assessment and lifestyle choices.

While many portions of this book are frankly depressing and may not be helpful to the general readership interested in more information about breast cancer, *My Mother's Breast* will undoubtedly speak openly and honestly to the woman attempting to cope with her mother's disease and her own fears about breast cancer and death. Anyone who has had the privilege of caring for women whose mothers have contended with breast cancer will find these personal stories familiar and enlightening.

Lori L. Fritts, M.D.
Hartford

IN MEMORIAM

BURACK, JASON O., Tufts University School of Medicine, 1939. Dr. Burack was in private practice in Norwalk and served on the staff of Norwalk Hospital for 50 years retiring in 1997. He was a member of the Fairfield County Medical Association and the Connecticut State Medical Society. Dr. Burack died 19 August 1999 at the age of 85.

DISKAN, A. ELMER, Temple University School of Medicine, 1937. Dr. Diskan practiced medicine in Manchester for 50 years. He was active aboard the medical ship Project Hope, as well as serving on its board of directors. He was a member of the Hartford County Medical Association, the Connecticut State Medical Society, and the American Medical Association. Dr. Diskan died 28 July 1999 at the age of 86.

DOERING, ROBERT W., University of Kansas School of Medicine, 1948. Dr. Doering practiced medicine in Bridgeport for 32 years and served on the staff at Bridgeport Hospital. He was a physician founder, president and first medical officer of Physicians Health Services from 1977 to 1984. He went on to serve as chief of internal medicine at El Progresso Delsierto Clinic in California. Returning to Connecticut in 1990, Dr. Doering continued to practice medicine at Fairfield area clinics. Past president of the Greater Bridgeport Medical Association, Dr. Doering was a member of the Fairfield County Medical Association and the Connecticut State Medical Society. Dr. Doering died 24 August 1999 at the age of 77.

KAETZ, HARVEY W., Tufts University School of Medicine, 1940. Dr. Kaetz served as Medical Director and attending clinical physician in internal medicine at the Yale University Health Center. Prior to that, he was in private practice in the New Haven area for over 25 years specializing in oncology and hematology. He was a Clinical Professor of Medicine at Yale University Medical School and past president of the medical staff at Yale New Haven Hospital. He was a member of the New Haven County Medical Association and the Connecticut State Medical Society. Dr. Kaetz died 19 August 1999 at the age of 85.

McCRANN, DONALD J., Tufts University School of Medicine, 1934. Dr. McCrann practiced obstetrics and gynecology in Bloomfield and was attending physician at St. Francis Hospital. He also served as president of the hospital's medical staff and taught residents and medical students at the hospital's Obstetrics and Gynecology Clinic. He was a volunteer doctor at St. Agnes Home for Unwed Mothers. Dr. McCrann was a past president of the New England Obstetrics and Gynecology Society and section chairman of the American College of Obstetrics and Gynecology. He was a member of the Hartford County Medical Association and the Connecticut State Medical Society where he was a former vice president and served on the Committee on Maternal Morbidity and Mortality for over 10 years. Dr. McCrann died 7 August 1999 at the age of 90.

PANTALEO, CARL V., Creighton University School of Medicine, 1943. Dr. Pantaleo retired from the practice of radiology in 1987. He was the founder of Radiology Group PC. He was a member of the New Haven County Medical Association, the Connecticut State Medical Society, and the American Medical Association. Dr. Pantaleo died 23 July 1999 at the age of 82.

TIRELLA, FRED F., Tufts University School of Medicine, 1937. Dr. Tirella retired from the practice of internal medicine and cardiology in 1984. He was a member of the Hartford County Medical Association where he served as a delegate to the Connecticut State Medical Society in the 1960s, the Connecticut State Medical Society where he served on the Conference Committee with the Connecticut Pharmaceutical Association during the 1960s and the Committee on Mental Health during the 1970s, and the American Medical Association. Dr. Tirella died July 1999 at the age of 88.

VERNLUND, ROBERT J., University of Vermont College of Medicine, 1945. Dr. Vernlund practiced ophthalmology at Hartford Hospital and Newington Children's Hospital. He served as assistant clinical professor of ophthalmologic surgery at the University of Connecticut Medical School. In addition to regional and national ophthalmological societies, Dr. Vernlund was a member of the Hartford County Medical Association, the Connecticut State Medical Society, and the American Medical Association. Dr. Vernlund died 5 September 1999 at the age of 78.

YANNET, HERMAN, Yale University School of Medicine, 1929. Dr. Yannet, active in the field of mental retardation, served as the medical director of the Southbury Training School for more than 30 years. He was a professor emeritus at Yale University School of Medicine and for many years conducted a pediatric neurology clinic and acted as a consultant and lecturer. In the early 1960s he participated in a White House Conference on Children's Health. He was a member of the New Haven County Medical Association, the Connecticut State Medical Society where he served on the Technical Medical Advisory Committee to the Crippled Children Division for 16 years, and the American Medical Association. Dr. Yannet died 31 July 1999 at the age of 95.

ZEHRUNG, WILLIAM J., New York Medical College, 1950. Dr. Zehrung was on the staff of New Milford Hospital for 25 years. He served as chief of the anesthesiology department and later served as chief of staff of the hospital. From 1970 to 1989, he served as director of health for the town of New Milford. Dr. Zehrung was a member of the Fairfield County Medical Association, the Connecticut State Medical Society, and the American Medical Association. Dr. Zehrung died 24 August 1999 at the age of 80.

CSMS PHYSICIAN PLACEMENT SERVICE

The Society maintains the Physician Placement Service as a *free* service to the medical profession, hospitals, and communities in Connecticut.

***Opportunities* should be typed, double-spaced copy on letterhead and submitted to CSMS, Physician Placement Service, 160 St. Ronan Street, New Haven, CT 06511 (203) 865-0587 or fax to (203) 865-4997. These will be published as space permits and will be distributed to physicians inquiring about such *opportunities*.**

***Physicians wishing to locate* in Connecticut may call the office requesting opportunities in their specialty. Also, candidates are invited to submit a resume to be kept on file with the Society. An announcement of a physician's availability will be published in two issues of *Connecticut Medicine* as space permits.**

Listing of physicians in the Placement Service does not in any way represent certification by the Society. Investigation of credentials and experience is the responsibility of those seeking applicants for positions.

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Available October 1999. Licensed in Connecticut. Passed National Boards. American Board certified. M.D. at Georgetown University. Internship and residency at St. Vincent's Hospital, New York City. Specializing in OB-GYN, Primary Care and Addiction Services. Please respond to John W. Paggioli, M.D., 728 Paddock Ave., Meriden, CT 06450; telephone (203) 237-3740.

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Connecticut Medicine

The Journal of the Connecticut State Medical Society

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Women in Sports

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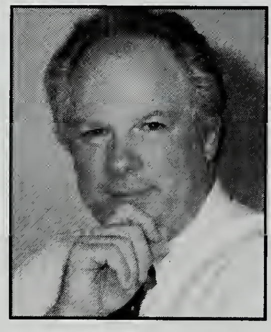

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Sports Medicine Special Issue

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Women in Sports

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Norman A. Zlotsky

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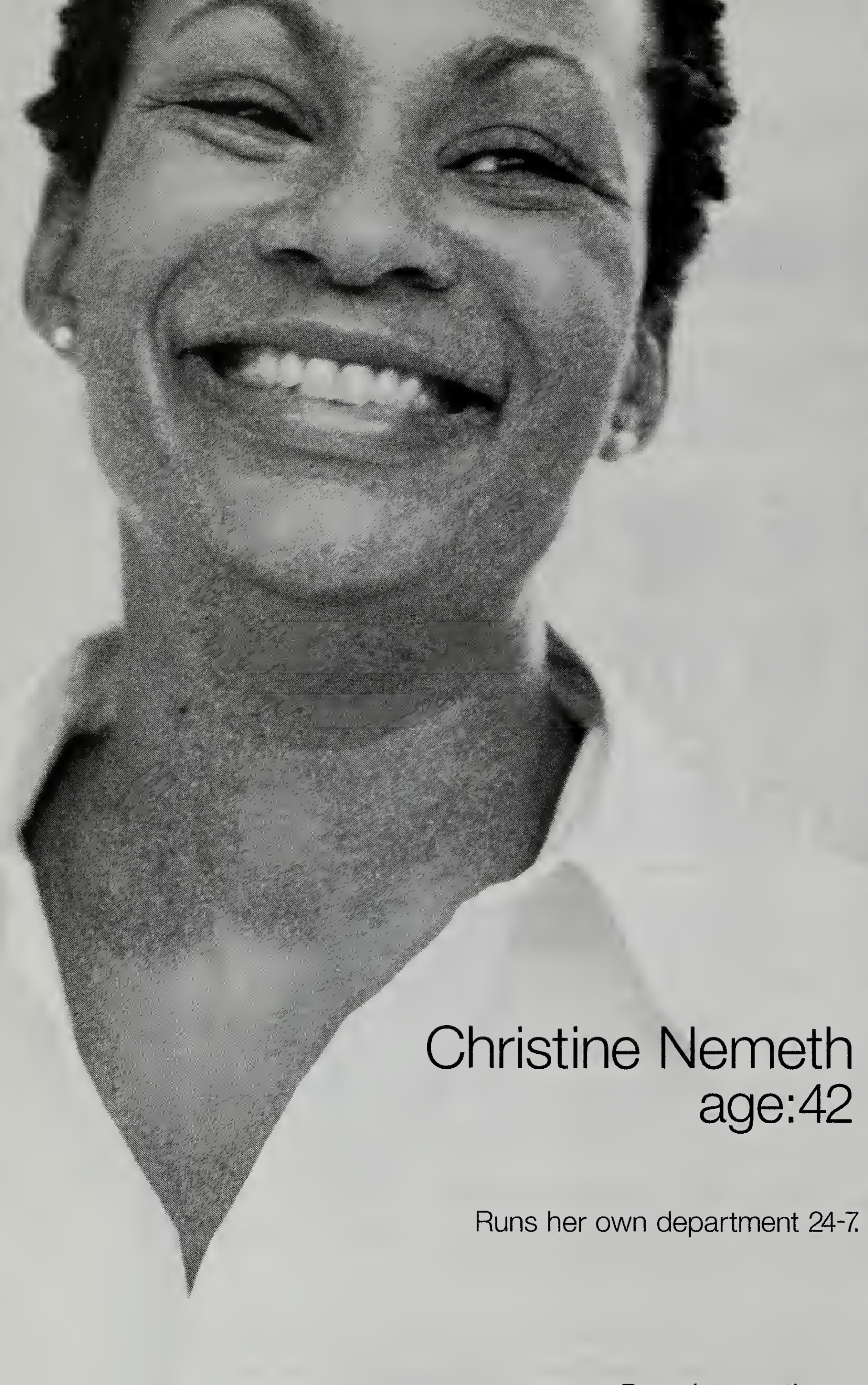

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GUEST EDITORIAL

Sports Medicine

1974. Sports medicine was in its infancy. The American Orthopaedic Society for Sports Medicine had been formed in 1970 and was beginning to expand. Fellowships were just being considered, and any organized medical teaching group was still a long way off. Interested physicians, mainly orthopaedists, had to learn many things they were not taught in their residencies. My introduction to sports medicine had been arranged for by the U.S. Army in 1964 with orders to be stationed at the United States Military Academy at West Point. Those orders ultimately included being on the football practice field each afternoon during the season, and covering all other sports as Corps Squad (intercollegiate team) physician. On arriving in Connecticut in 1967, I found no organized sports medicine activity in the medical community. After several years of settling into private practice, I wrote the then chairman of the CSMS Council, Dr. Andrew Canzonetti, recommending the formation of a sports medicine committee of the state medical society and suggested a charge to the committee if formed. In due time both were favorably considered by the Council, and I was named the first chairperson. I found a number of like-minded physicians around the state and the rest is history. We became the only committee with a waiting list, and gradually expanded from 12 to 27.

In carrying out its charge, the committee has reached a number of goals. The publication of *Connecticut Sportsmed*, our quarterly newsletter, is an important one. It reaches all interested coaches, trainers, physical therapists, and physicians in the state providing information on prevention and optimal care of sports related injuries. Over the years, many conferences have been sponsored by the committee supplying useful information to those running sports medicine programs and those providing medical coverage for those programs, especially at the high school level. Acting as consultant for the Connecticut Interscholastic Athletic Conference (CIAC), we were influential in changing football rules outlawing spearing, butt blocking, face tackling, and crack back blocking well before these rules were changed in most of the rest of the country. The same was true of mandatory face masks in hockey, and a weight control program in wrestling which has avoided the sequelae of acute dehydration which caused three deaths around the country last year.

The charge to the Committee on the Medical Aspects of Sports is as follows: "The purpose of the committee shall be to plan continuing educational programs in the field of sports activities, to maintain liaison with sports governing boards in Connecticut, to improve and standardize rules designed to prevent sports injuries in Connecticut, to foster the development of the team physician concept and seek to interest more physicians in such a concept, to act as medical consultants to CIAC, and to serve as the editorial board of the Society's publication *Connecticut Sportsmed.*" I believe this charge is as valid today as it was 25 years ago, and will continue to guide the committee for the foreseeable future.

To commemorate these 25 years of accomplishments, we have been given the privilege of providing a sports medicine issue of *Connecticut Medicine* by its editor, Dr. Crombie. As guest editor, I have solicited the articles from my sports medicine origins. The majority of the articles are aimed at female sports injuries, of great interest with the fantastic growth of the women's sports programs with intensive training. Please let us know if we have hit the mark or at least come close.

The cover shows action in women's sports by UConn teams as representative of this explosion of the number of participants for whom we must provide enlightened preventive information and care when needed to return these athletes to action as soon as possible. I also felt while some teams, as basketbal,l are primarily in the spotlight, others could use more exposure to emphasize their degree of excellence.

In closing, I would also like to dedicate this issue to my old partner, Howard Glenn Abbott, M.D., who died on 5 June 1999. Howard, or Glenn as most people knew him, was a long time member of this committee and had been stationed with me at West Point. His counsel and support cannot be replaced.

Norman A. Zlotsky, M.D.
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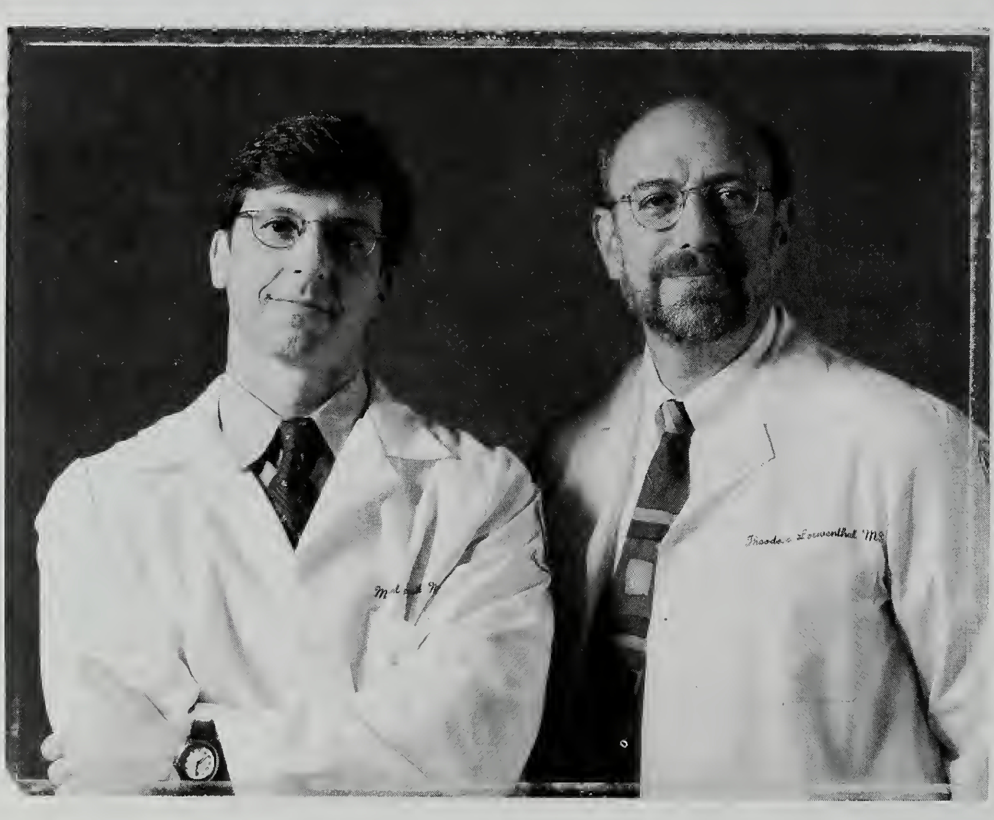

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The Female Athlete Triad: Disordered Eating, Amenorrhea, and Osteoporosis

JEFFREY M. ANDERSON, M.D.

Introduction

OVER the years, menstrual dysfunction has been commonly associated with the high levels of physical activity in which competitive female athletes engage. For many years there was little concern about this phenomenon because it was known that when the activity levels of these female athletes diminished, normal menstrual cyclicity returned without apparent detriment to the athlete. However in 1984, both Cann et al[1] and Drinkwater et al,[2] noted that the bone mineral density in these amenorrheic athletes was significantly lower than in their eumenorrheic peers. Furthermore, in 1986, Drinkwater noted that the bone mineral density in these amenorrheic athletes did not catch up to that of their eumenorrheic peers, even after the previously amenorrheic athletes regained normal cyclic menstrual function.[3] These findings led to concerns that athletic amenorrhea, which was felt to be a benign phenomenon, may actually lead to irreversible premature bone loss. The public health implication of this finding was that the current generation of amenorrheic female athletes would be at greater risk of premature osteoporosis, with all of its associated morbidity.

It has also been known that patients suffering with eating disorders also experience oligomenorrhea and amenorrhea. In fact, the presence of amenorrhea is incorporated into the DSM-IV diagnostic criteria for anorexia nervosa.[4] Weight loss practices have long been a part of women's participation in athletics. It became a concern that the rigorous physical training and caloric restriction practiced by many female athletes may actually work synergistically to place these female athletes at risk for oligomenorrhea or amenorrhea and the related risk of premature loss of bone mineral density. In 1993, the American College of Sports Medicine published the report of a 1992 consensus conference, and the term "Female Athlete Triad" was first used to describe the syndrome of disordered eating, amenorrhea, and osteoporosis in the athletic female.[5]

We live in a time of expanding athletic opportunities for young women. In 1972, the federal government passed Title IX legislation, which was written to prevent gender-based inequities and stated that no person, on the basis of sex, could be excluded from participation in any educational program or activity (including athletics) that received federal funding. This legislation opened the door to the development and expansion of women's intercollegiate athletics. Women's college sports have grown markedly since that time and are gaining increasing popularity. The development of women's professional basketball in this country and the success of the 1999 United States Women's World Cup soccer team have stirred further interest in women's sports. Now it is not only acceptable, but also desirable, for girls and women in our society to participate in sports. These developments are making it possible for unprecedented numbers of young women to realize the physical and psychological benefits of athletic participation. Unfortunately, as heavy energy expenditure and caloric restriction occur on a wider basis, more and more young women will be at risk of developing symptoms of the Female Athlete Triad.

This paper will review the three components of the Female Athlete Triad: disordered eating, amenorrhea, and osteoporosis. Additionally, it will give practical guide-

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JEFFREY M. ANDERSON, M.D., Director of Sports Medicine, University of Connecticut Division of Athletics, Assistant Clinical Professor of Family Medicine, University of Connecticut School of Medicine.

lines for identifying females with the problem, along with recommendations for evaluation and treatment.

Disordered Eating

The area of disordered eating in the female athlete is somewhat poorly defined. The spectrum of pathology can range in severity from caloric restriction to meet performance goals to symptoms that meet DSM-IV criteria for anorexia nervosa or bulimia nervosa. Anorexia nervosa is characterized by extremely restrictive eating behavior and a distorted body image in which the athlete perceives herself as overweight. She is unable to maintain a body weight that is at least 85% of expected, and she has experienced amenorrhea.[4] An athlete with bulimia nervosa experiences regular (at least twice a week) episodes of binge-eating characterized by both eating, in a discrete period of time, an amount of food that is definitely larger than most people would eat during a similar period of time and a sense of loss of control over eating during these episodes. She also participates in regular (at least twice a week) purging behavior, such as self-induced vomiting, abusing laxatives or diuretics, fasting, or excessive exercise. She also places undue emphasis on body image or shape in her self-evaluation, and her weight is greater than 85% of expected body weight.[4]

Most athletes who exhibit disordered eating behavior do not meet diagnostic criteria for anorexia nervosa or bulimia nervosa. Instead, they engage in regular caloric restriction and fail to meet the caloric and nutritional requirements of their activity. The motivation for such behavior is multifactorial. The easiest potential factor to address is simple nutritional misinformation. In this situation, the athlete is following a particular diet designed around misinformation provided by periodicals, peers, or coaches. This can often be readily addressed by appropriate nutritional counseling. Unfortunately, the problem is often much more complex than this. Our society places great pressure on young women to maintain a thin body appearance. Pressure from peers, parents, or coaches to lose weight, or participation in sports that emphasize thinness can worsen the situation. When coupled with low self-esteem, substance abuse, family dysfunction, physical abuse, or sexual abuse, an athlete can be at serious risk of developing an eating disorder.

The interrelationship between sports and eating disorders is a complicated one. It is known that sports in which low body weight is seen as a competitive advantage, sports in which the contestants are judged, and sports which require the athlete to wear particularly form-fitting or revealing uniforms experience a higher rate of eating disorders.[6] Such sports include distance running, swimming, diving, and figure skating.

The causal relationship between sport and eating disorder is difficult to establish, however. It is well known that coaching pressure and insensitive comments from coaches and judges have played a role in promoting eating disorders in young athletes. However, in other situations, girls with eating disorders have chosen to participate in a particular sport because it provides strenuous exercise, which they use to help control their weight. An example is the anorectic distance runner. Did her anorexia develop out of an intense desire to be highly competitive or did she choose to become a distance runner because of her anorexia?

Regardless of the eating disordered athlete's motivation to participate in athletics, there are several medical and psychological problems closely associated with eating disorders. Athletes are not exempt from these complications. In fact, their strenuous activity is an additional risk. This paper focuses on the side effects of amenorrhea and osteoporosis in athletes with disordered eating. Other medical and psychological problems associated with eating disorders include electrolyte imbalances, dehydration, hypoglycemia, anemia, gastrointestinal disturbances, cardiomyopathy, cardiac rhythm disturbances, substance abuse, depression, and suicide.[6,7]

Amenorrhea

In order to discuss the incidence and prevalence of amenorrhea in the female athlete population, it is important to maintain consistent definitions of the problem. Primary amenorrhea is the absence of menstruation, along with the presence of secondary sexual characteristics, by the age of 16.[8] Secondary amenorrhea is the loss of menstruation for three or more consecutive cycles in a female who has experienced menarche.[8] Previous studies have estimated that between 1% and 44% of female athletes have experienced amenorrhea.[6] Some of the reasons for the large variability between studies are the variability of definitions for amenorrhea used and the different subpopulations of athletes that have been studied.

The control of the normal female menstrual cycle lies in the hypothalamic-pituitary-ovarian axis. The pulsatile secretion of gonadotrophin-releasing hormone (GnRH) by the hypothalamus stimulates the production of the gonadotrophes, luteinizing hormone (LH) and follicle-stimulating hormone (FSH) by the anterior pituitary. These hormones, in turn, stimulate the ovary to produce estradiol and progesterone.[9]

The amenorrhea associated with the Female Athlete Triad is known as hypothalamic amenorrhea. In this situation, the normal pulsatile secretion of GnRH from the hypothalamus is altered, leading to decreased production of LH and FSH. Ultimately, the diminished LH production leads to a diminution in the production of estrogen. Over time, several mechanisms for this phenomenon have been postulated. Both endogenous opioids and corticotropin-releasing factor (CRF) have been noted to have an inhibitory effect on the production of LH via GnRH. However, although opioids have been shown to inhibit LH production,[10,11] their role in amenorrheic athletes remains unclear. Although it has been shown that there are differences in beta-endorphin levels between active amenorrheic women and sedentary eumenorrheic women,[12] differences in beta-endorphin levels have not been found between trained amenorrheic and eumenorrheic athletes.[13] CRF and the entire hypothalamic-pituitary-adrenal axis have an inhibitory effect on the hypothalamic-pituitary-ovarian axis.[14] The actual role CRF plays in athletic amenorrhea remains unclear.[15,16]

Recent attention has also been paid to the protein leptin and its potential role in athletic amenorrhea.[15,17] Leptin is a protein expressed in adipocytes that has been correlated with fat mass and body weight in overweight and underweight subjects.[15,18,19] Kopp et al,[20] found that a critical leptin level was necessary to maintain menstrual function. Further research into leptin's role in the mechanism of athletic amenorrhea is necessary.

Osteoporosis

Osteoporosis is a well-recognized cause of substantial morbidity in our society. The following criteria have been established by the World Health Organization:[21]

Normal: Bone mineral density (BMD) that is less than one standard deviation (SD) below the mean for the patient's age group.

Osteopenia: BMD between 1 SD and 2.5 SD below the mean.

Osteoporosis: BMD more than 2.5 SD below the mean.

Severe osteoporosis: BMD more than 2.5 SD below the mean plus at least one fracture resulting from the osteoporosis.

Cancellous bone is the most estrogen-responsive,[22] and osteoporosis preferentially affects cancellous bone. Therefore, its clinical consequences are most commonly seen in bones that have a higher percentage of cancellous bone. These bones include the vertebral bodies, femoral neck, and distal radius. Not surprisingly, vertebral compression fractures, distal radius fractures, and femoral neck fractures are commonly seen in osteoporotic women.

Postmenopausal osteoporosis is directly linked to the hypoestrogenic state. Estrogen replacement therapy has been clearly shown to have a beneficial effect on postmenopausal bone loss.[23] Additionally, a variety of hypoestrogenic conditions, such as anorexia nervosa, pituitary tumors, lactation, and premature ovarian failure are also linked with loss of bone mineral density. The hypothalamic amenorrhea associated with the Female Athlete Triad also results in a hypoestrogenic condition. It is believed that this low estrogen level leads to the premature osteoporosis noted in athletes affected by the Female Athlete Triad.

Premature osteoporosis results in both short- and long-term consequences. In the short term, oligoamenorrheic athletes have been shown to have higher rates of injury,[24,25] particularly stress fractures.[26] In the long term, one who develops premature osteoporosis is at increased risk for osteoporotic fractures and their incumbent morbidity at a younger age.

Identifying the Problem

The challenge in identifying the Female Athlete Triad in a young athlete is that many of its symptoms "fly beneath the radar" of traditional medical detection and intervention. In the athletic culture, periods of amenorrhea are mistakenly felt to be normal because they are so common. For this reason, an athlete will frequently not report that they are regularly missing periods. Disordered eating, by its nature, is a very secretive problem. It is quite uncommon for a young woman to volunteer that she is participating in caloric restriction or binging/purging behavior. Additionally, most women with the Female Athlete Triad do not suffer from anorexia or bulimia nervosa. Their disordered eating, because it often does not meet DSM-IV criteria for a frank eating disorder, may be overlooked. Finally, osteoporosis is an occult process that progresses unknown to either the athlete or her caregiver until it manifests itself with a fracture.

For these reasons, it is important that the physician maintain a high index of suspicion for the Female Athlete Triad. The discovery of a history of amenorrhea in a young athlete's routine medical care should prompt investigation into nutritional behavior, as well as appropriate evaluation for the cause of the amenorrhea. One must remember that athletic amenorrhea remains a diagnosis of exclusion. Other common causes of amenorrhea must be ruled out prior to reaching the diagnosis of athletic amenorrhea. Each athlete with amenorrhea should undergo a pelvic examination and be evaluated for pregnancy, thyroid disease, and hyperprolactinemia. The absence of these abnormalities, a low to low normal LH and FSH, and a failure to stimulate a withdrawal bleed after a progestin challenge is highly suggestive of hypothalamic amenorrhea with hypoestrogenemia.

One must also remain aware of the psychological and physical symptoms of disordered eating. If an athlete shows herself to be excessively concerned with weight or dieting, or if she is particularly self-deprecating, further investigation into dietary habits is recommended. Nonthreatening methods of inquiry include asking the athlete about her "ideal" weight or asking her how she would respond if she awoke tomorrow five pounds heavier. A simple dietary recall can also give insight into the patient's regular nutritional habits and attitudes toward food. Regardless of what she reports, an athlete who knows the fat and caloric content of everything she eats should stimulate concern. Physical findings associated with eating disorders can also be noted. These include marked thinness, orthostasis, fine lanugo hair, carotenemia, parotid swelling, or erosion of the tooth enamel from recurrent vomiting.

Finally, any athlete presenting with a stress fracture should have a history obtained that includes a menstrual history and baseline nutritional assessment. Menstrual history should include age at menarche, frequency and regularity of menses, the use of oral contraceptive pills, and any previous history of missed periods. A simple nutritional screen can be done by asking the patient to cite what she ate yesterday, or on a typical day if the previous day had been unusual.

After the general physical examination with a pelvic examination, a series of baseline evaluations are beneficial in an athlete showing signs of the Female Athlete Triad. In addition to the amenorrhea evaluation noted above, an assessment of the athlete's complete blood count, looking for anemia or a low white blood cell count, is merited. Iron deficiency, even in the absence of anemia is also very common, and is best assessed with a serum ferritin determination. Serum electrolytes, particularly potassium, can be deranged, as can liver enzymes, amylase, and lipase. One can also obtain a baseline electrocardiogram. One must keep in mind that certain findings, such as sinus bradycardia, sinus arrhythmia, and early repolarization are usually normal variants in the trained athlete. It is also important to realize that the absence of laboratory abnormalities does not preclude potentially dangerous eating disorders. Laboratory values often remain within normal limits until the end stages of the illness.

Determination of bone mineral density with dual energy x-ray absorptiometry (DEXA) scanning is also beneficial. The information derived from the bone densitometry can be used as a motivational tool for the athlete with low bone mineral density, reinforcing the importance of treatment. Conversely, the physician must reinforce with the athlete that a "normal" result does not indicate that the athlete is not at risk if her disordered eating and amenorrhea continue to go untreated. Measuring progression of disease or response to therapy with DEXA scanning is difficult, however. Error associated with DEXA scanning ranges between 0.5% and 5%, and changes noted on follow-up scanning may be within the range of error for the procedure.[27]

Management Strategies

The management of the athlete with the Female Athlete Triad is best accomplished in a multidisciplinary fashion. The physician should be responsible for the medical care of the athlete and for coordination of the athlete's care. The physician is also the one with the ultimate responsibility of clearing the athlete for participation. A nutritionist is also vital in providing guidance for the athlete in the nutritional concerns that are part of the triad. It is also common to involve the services of a mental health professional for those athletes with subclinical or frank eating disorders.

The primary goals of treatment are to control and manage the athlete's disordered eating, to restore the normal hormonal milieu as best possible, and to monitor for and treat any other medical complications of the disordered eating. Ideally, the athlete should decrease activity by 10% to 20% and gain weight. If this is achieved, menses may resume spontaneously.[3] However, circumstances surrounding a competitive athlete may not permit her to decrease her activity by 10% to 20%, and an athlete with an eating disorder is likely to be extremely resistant to gaining weight. One should not depend solely on the athlete changing their behavior to resume normal menstrual activity.

Calcium supplementation should be implemented in all athletes with the Female Athlete Triad. Fifteen hundred mg per day is recommended.[27] The athlete should also be counseled to take in adequate calories to match her energy expenditure as an athlete.[6] In endurance athletes, this can be more than 2,500 calories per day.[28] It should be noted that, in several studies, it has been noted that the daily energy intake of female athletes routinely falls short of their daily energy expenditure.[23,29,30] The quality of caloric intake is as important as the quantity. Many female athletes ascribe to either vegetarian diets or diets high in carbohydrates. Inadequate protein intake in either of these diets also predisposes to hypothalamic amenorrhea. Therefore, nutritional counseling should also assure that the female athlete has adequate protein supplies in her diet.

Nutritional adjustments may be inadequate to promote adequate estrogen levels to menstruate regularly and promote bone formation. The role of hormone replacement has been well documented.[23] As with postmenopausal females, estrogen supplementation has been shown to be beneficial to bone mineral density in amenorrheic athletes.[31] Unlike postmenopausal females, however, standard low-dose estrogen supplementation may be inadequate to stimulate bone formation. The literature examining the use of typical postmenopausal estrogen doses. such as 0.625 mg of estradiol. is mixed in documenting benefit.[32–34] The use of higher estrogen doses in the form of oral contraceptive pills has been documented by Hergenroeder et al, to significantly improve bone mineral density in athletes with hypothalamic amenorrhea.[31] Because the use of oral contraceptive pills has proven effective in restoring some of the bone mineral density lost in those with the Female Athlete Triad. and because significant bone loss may occur within six months of hypoestrogenic amenorrhea.[8] it is important to promptly evaluate and recommend treatment to an amenorrheic athlete.

The athlete may have substantial concerns regarding starting birth control pills. Common side effects of oral contraceptive pills include acne and breast tenderness. Whereas some weight gain may occur on oral contraceptive pills, it is commonly much less than is feared by the athlete. There currently exist no recommendations regarding when oral contraceptive pills can be discontinued. One needs to use clinical judgement in making this decision. It should be noted that if menses do not resume within three to six months after discontinuance of oral contraceptive pills, the athlete should go back on them.

Summary

The Female Athlete Triad is a common clinical entity amongst female athletes. The physician caring for such athletes needs to keep the symptoms of the triad in mind and recognize their potential severity. Still more needs to be done in the areas of prevention. early detection, and early treatment. Education efforts should be focused on junior high and early high school girls because the rapid bone formation during puberty will be necessary to carry them for the rest of their lives.

It is also important to note that the female athlete triad should not be used as a reason to disqualify otherwise healthy female athletes from athletic participation. Athletic participation and exercise are good and healthy, if done appropriately. Women have made great strides in the athletic realm, and it would be inappropriate to imply that they should not participate because of the risk or presence of the Female Athlete Triad.

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Physical Training and Injury in Female Cadets at the United States Military Academy

BRADLEY J. NELSON, M.D., JOHN M. UHORCHAK, M.D.,
MAUREEN K. LeBOEUF, Ph.D. AND DEAN C. TAYLOR, M.D.

ABSTRACT—Women have been enrolled at the United States Military Academy (USMA) since 1976. All cadets are required to participate in a rigorous physical training curriculum with few differences for male and female cadets. The effect this physical training has on the health of women at West Point has been monitored closely. This paper will review the physical training program at USMA and the gender differences that exist. The health effects of this demanding physical training on women will also be discussed.

Physical Training

PHYSICAL training and athletic participation are an integral part of the curriculum at the United States Military Academy (USMA) at West Point. Every cadet is required to participate in organized athletic competition and maintain a high level of physical fitness. The importance of athletic competition in the development of Army officers is underscored by a quote from Douglas MacArthur that appears on the walls of the cadet gymnasium: "Upon the fields of friendly strife, are sown the seeds that, upon other fields, on other days, will bear the fruits of victory."

Since 1976, this focus on physical training has included women after Congress passed Public Law 94-106 that allowed the admission of women into the United States Service Academies. Importantly, this law mandated that "the academic and other relevant standards required for appointment, admissions, training, graduation, and commissioning of female individuals shall be the same as those required for male individuals, except for those minimal essential adjustments in such standards required because of physical differences between male and female individuals."[1] Women at West Point are expected to complete the same physical fitness requirements as their male counterparts with only a few exceptions.

All cadets are required to complete Cadet Basic Training prior to beginning their freshman year. This six-week-long course of intense physical and military training is the same for male and female cadets. Cadets must participate in an ongoing physical development program throughout the academic year. All cadets are required to complete the Indoor Obstacle Course Test (IOCT) and the standard Army Physical Fitness Test (push-ups, sit-ups, and two-mile run). Cadets participate in a variety of military training activities after their sophomore and junior years. This training, including airborne and air assault schools, is the same for male and female cadets.

Male and female cadets are required to participate in competitive athletics. This can be at the intercollegiate, club, or intramural level. There are women intercollegiate teams in basketball, soccer, track, cross-country, tennis, volleyball, softball, and swimming. Forty-five percent of women at West Point compete at the intercollegiate level compared to 30% of the male cadets. Most of the club and intramural sports are mixed gender. There are male only teams in rugby, boxing, water polo, team handball, squash, and volleyball. There are female only teams in lacrosse and team handball.

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Although the curriculum at West Point is remarkably similar for male and female cadets, there have been some changes made since the matriculation of women in 1976. Stauffer showed that female cadets had decreased upper body strength, leg strength, grip strength, and power endurance compared to male cadets but showed no difference in cardiorespiratory efficiency relative to body weight.[2] These physiologic differences between men and women resulted in minor changes to the curriculum. The parallel bar hand walk was eliminated from the Indoor Obstacle Course Test. Women perform the balance beam and uneven bar events instead of the parallel bars and high-bar events in gymnastics. Women take self-defense courses instead of the boxing and wrestling courses their male counterparts take. Women are not allowed to participate in intramural football, wrestling, boxing, and rugby. Changes made to Cadet Basic Training included: separate running groups were based on ability, fewer hills were included in the runs, and women carried the lighter M-16 rifles instead of the heavier M-14.[3]

Finally, the physical performance of the cadets is graded using different rating scales for men and women. The physiologic differences between men and women have resulted in evaluations based on equal effort rather than equal performance.

Injury

Numerous studies performed at the United States Military Academy have shown differences in the injury rates between male and female cadets.[4-7] McBride et al, showed that women had an increased rate of lower extremity overuse injuries with a three-fold increase in the incidence of patellofemoral pain and shin splints.[4] This study also demonstrated an increased incidence of ankle sprains, low back pain, and stress fractures in women. Conversely, male cadets demonstrated a higher rate of shoulder instability and an increased incidence of hand and wrist injuries. This was felt to be secondary to male cadet participation in boxing and tackling sports such as football and rugby. A prospective, longitudinal study by Ryan and Taylor (unpublished data) also showed a significantly higher rate of overuse injuries in women. The authors noted a five-fold increase in the rate of stress fractures in female cadets. The rate of traumatic injuries was the same for women and men.

Stress fractures have been a point of interest at USMA due to the loss of training time caused by these injuries. Protzman and Griffis studied the incidence of stress fractures in the first female class at USMA.[6] The authors noted that women had a 10% incidence of stress fractures during Cadet Basic Training compared to 1% for the male cadets. Since this initial class a number of changes have been instituted. Cadets run in different ability groups according to their run times and running shoes are worn instead of combat boots. Shorter cadets are placed in front to set the stride during marching. In addition, a pre-arrival training program was developed for the new cadets to begin three months prior to their arrival at West Point. These changes have decreased the incidence of stress fractures but a gender difference still exists. Welch studied the Class of 1990 during Cadet Basic Training and demonstrated a stress fracture rate of 5.1% for female cadets compared to 0.5% for male cadets.[7] The preliminary results from a study following the Class of 2002 also show a gender difference. Women demonstrated an 11.8% incidence of stress fractures during their first year at West Point compared to 2.8% for males (Nieves J, DeWitt D: unpublished data).

The relation of gender and anterior cruciate ligament (ACL) injuries has generated significant interest in the sports medicine community. We have been prospectively following the cadets at USMA since 1994. The overall probability of sustaining an ACL tear is 0.030 for women and 0.036 for men, which is not significantly different. However, if the injuries sustained in football and rugby are eliminated because women do not participate in these sports then the relative risk for women increases to 1.43 which is statistically significant. Interestingly, the ACL injury rate for women at USMA is not as high as other collegiate women and is also not as high as the rate reported for females at the United States Naval Academy.[8,9] The reason for this difference is not known.

In conclusion, the changes made to the physical training curriculum at USMA since women began attending have been minimal. Women have performed well in this demanding environment. Physiologic gender differences have resulted in different rating scales for men and women and some restrictions on activities in which women can participate. Women sustain more overuse injuries than males and a higher rate of stress fractures. Female cadets sustain ACL injuries more frequently than their male colleagues but less frequently than other collegiate women. Further study is ongoing in an effort to determine the etiology of these gender differences and improve the health of women at the United States Military Academy.

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Dr. Anthony Kirkpatrick, M.D., Ph.D., director of research of the Reflex Sympathetic Dystrophy Syndrome Association of America (RSDSA) has appointed an interdisciplinary committee to write Practice Guidelines for the diagnosis, treatment, and management of Reflex Sympathetic Dystrophy Syndrome (RSDS), also known as Complex Regional Pain Syndrome (CRPS). The first edition of the Guidelines is now available on RSDSA's Internet Web site at <www.rsds.org> in English and Spanish, and consumers and professionals are encouraged to review and critique the document.

RSDS/CRPS is an under-diagnosed and under-treated pain-filled neurological syndrome that results from a soft tissue injury or minor trauma. The pain (often described as severe, constant, stabbing, and burning) and sensitivity to touch are out of proportion to the original injury.

Introducing the section on treatment, Dr. Kirkpatrick writes, "The single most important modality for treating the patient with RSDS is education." Utilizing a detailed algorithm, medical professionals are guided step-by-step through the diagnosis and treatment of RSDS/CRPS. The Guidelines are written in patient-friendly language to enable individuals with RSDS, without access to specialists to make informed decisions about their care.

It is paramount that individuals with early-stage RSDS be identified before the Syndrome becomes an irreversible, progressive, pain-filled nightmare. Wide dissemination of the Guidelines will insure that the telltale symptoms are recognized and appropriate, sequential treatment is provided to the estimated 5,000,000 Americans who develop RSDS each year.

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Anterior Cruciate Ligament Injuries in Female Athletes

C. ROBERT BIONDINO, M.D.

OVER the past decade, sports physicians, orthopaedic surgeons, trainers, and female athletes have recognized that deceleration, noncontact injuries have produced anterior cruciate ligament injuries at an alarming rate in high school and college female athletes. A review of the NCAA Injury Surveillance System supports the notion that there are different injury rates by sex (Fig. 1). Men's and women's sports cannot be compared exactly because of differences in the rules (men's lacrosse is contact, women's lacrosse is not) and type of activity (women's and men's gymnastics share only the vault and floor exercise). Yet where males and females play on similar surfaces, with similar rules and activity levels, as in basketball and soccer, there exists a higher percentage of anterior cruciate ligament injuries in females. The NCAA with the aid of the PAC 10, Big Ten, and ACC has compiled statistics that underscore the concern[1] (Fig. 2).

Females have been shown to have a higher incidence of anterior cruciate ligament injuries in skiing, gymnastics, handball, volleyball, basketball and soccer than their male counterparts.

Research has suggested that females have a multifactorial reason for their injury pattern[2] (Figs. 3–6). Certainly, contact injuries in men produce cruciate ligament injuries. It has been suggested that 72% of football players with knee injuries were hypermobile. This 1970 Nicholas[3] study has never been substantiated in the female athlete. Furthermore, detailed studies in females with bilateral injuries have not shown any conclusive relationship between hypermobility in general and laxity of the knee and anterior cruciate ligament as was demonstrated in the males in the study.

Figure 1.—National Collegiate Athletic Association Frequency Data Anterior Cruciate Ligament Injuries

	1988–1989	**1989–1990**	**Total**
Women	50	34	84
Men	7	12	29

Figure 2.—Total Injury and Knee Injury Summary for Basketball (1989–1993)

Factor	**Men's Basketball**	**Women's Basketball**
Teams submitting data (ave./year)	531 (107)	676 (116)
All injuries	4,116	3,303
Knee injuries (% of all injuries)	503 (12%)	615 (19%)
Athlete exposures	736,076	639,898
Knee injury rate (per 1,000 exposures)	0.70	1.0

Some current areas of research are worthy of discussion. They include:

1. The femoral notch width or condyle size.
2. Shoe and surface interface.
3. Deficiencies in training with regard to skill level, proprioception, coordination, muscular balance, and recruitment.
4. Lower extremity malalignment.
5. The crucial effect of estrogen on ligament laxity.

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In 1993, a study of more than 900 male and female high school athletes correlated that noncontact cruciate ligament injuries occurred in athletes with a smaller notch-width index than in athletes whose cruciate ligaments tore in contact activities. LaPrade et al,[4] correlated intercondylar notch stenosis and anterior cruciate injuries in a prospective study and found that no conclusive evidence referable to female anterior cruciate ligament tears could be made. This study recorded no evidence of the role of notch width index or notch width in anterior cruciate ligament injuries. However, studies relating width to width, that is, width of the notch to width of the anterior cruciate ligament, have led Japanese literature to postulate that, if all anterior cruciate ligaments are the same size, a smaller notch is more likely to cause impingement on a normal sized ligament.[5]

Shoe and surface interface have also been reviewed in the literature. Basketball sneakers and cleated soccer shoes are all similar at a high performance level. They do not perform the same, however, on male and female feet. Norwegian investigators studying three upper divisions of female handball players postulated a relationship of sneakers with a higher friction rate to anterior cruciate ligament injuries after a review of high incidence of injuries.[6] The female foot differs from the male. It has a narrow heel, small heel cord, and is narrower relative to overall length than the male foot. Leg length is 51% of female body height compared to 56% in males. Female's feet strike the ground more often to cover an equal distance and also have more ground reaction forces. It is entirely possible that females simply have more opportunities to injure the cruciate ligament.

In many sports, the female shoe is a smaller version of the shoe worn by men. In the shoe industry, this is referred to as scaling. The problem worsens for women with a shoe size of 8 or greater. Straighter lasts to correct female pronation are desirable, yet width adjustment to correct the last is only accomplished by tighter lacing of the sneaker. The average athletic size is a D width for males and a C width for females. A compromise in design must be met to enhance performance and protect the athlete. With increasing amounts of ankle resistance, as in the use of high top athletic shoes for basketball, movement is restricted in the frontal plane. In an effort to reduce ankle inversion injuries, knee strain is increased in a manner similar to that of ski boots. Still, the question remains whether it is surface to surface friction or foot imbalance at the time of pronated foot strike that causes cruciate ligament injuries.

Figure 3.—Prevalence of Anterior Cruciate Injuries in the Big Ten Conference (10 Insitutions)

	Men	**Women**
Number of participants	145	140
Documented ACL injuries	3	27
Prevalence of ACL injuries	2.1%	19.3%

Figure 4.—Prevalence of Anterior Cruciate Ligament Injuries in the Pacific Ten Conference (10 Institutions)

	Men	**Women**
Number of participants	138	130
Documented ACL injuries	1	16
Prevalence of ACL injuries	0.7%	12.9%

Figure 5.—Prevalence of Anterior Cruciate Ligament Injuries in the Atlantic Coast Conference (9 Insitutions)

	Men	**Women**
Number of participants	119	115
Documented ACL injuries	5	19
Prevalence of ACL injuries	4.2%	16.5%

Figure 6.—Prevalence of Anterior Cruciate Ligament Injuries Combined Data (29 Insitutions)

	Men	**Women**
Number of participants	402	385
Documented ACL injuries	9	62
Prevalence of ACL injuries	2.2%	16.1%

Skill level appears to have a multifaceted influence at the cellular level in cruciate ligament injuries. Females mature at an earlier age than males. Does the slower onset of puberty in males play an important role in preventing injury? A Ball State study of muscle biopsies in male and female track athletes demonstrated that the two groups were similar in terms of muscle fiber composition and selected enzymatic activities. There were, however, notable differences in muscle enzymes and in slow twitch fiber characteristics in males and females competing in and training for similar sports. Male athletes presented with larger fiber areas. These slow twitch fibers seemed essential for speed and endurance in track and field events. Does a difference between glycolitic and oxidated enzyme activities correlate to performance, speed, endurance, and strength? It has been suggested that performance, in part, reflected genetic endowment. Was there a demonstrated physiologic difference between males and females shown in lower extremity strength, endurance, muscle reaction time, muscle recruitment order, and joint laxity? The Wojtys[7] study suggests yes. The anterior cruciate ligament is clearly a primarily static restraint, but the lower extremity muscles, particularly the hamstrings, are dynamic balancers, preventing anterior translation of the tibia.

The quadriceps muscle is an anterior cruciate ligament antagonist. In females, the order of muscle recruitment is different than in males. A study conducted by Wojtys et al,[7] demonstrated that 31% of the female athletes recruited the quadriceps first whereas only 17% of the males did. In these athletes, the quadriceps contraction placed an increased strain on the anterior cruciate ligament due to tibial translation anteriorly. In addition, peak muscle reaction time appeared delayed in the female athletes. As these studies were conducted on elite collegiate female athletes at the University of Michigan, inadequate conditioning should not have been a factor in the results. Anterior translation is greater in female than male athletes, perhaps playing a role in the increase in female injuries. Intuitively, the dynamic restraints of the musculoskeletal system should prevent or lessen injury during physical activity. Fatigue and lack of endurance decrease the effectiveness of this dynamic system, and contribute to the increased injury rate.

Contact sports show decreased anterior cruciate ligament injury with increased agility drills for males. Not surprising, when rehabilitating a patient after anterior cruciate ligament repair, therapy includes agility drills and plyometrics to strengthen the knee.

Lower extremity alignment has been dismissed by many examiners as having no role in anterior cruciate ligament injuries. Clearly, however, the miserable triad of hip anteversion, increased external tibial torsion, and pronated feet, characteristic of females, alters patello-femoral biomechanics. Meister et al[8] recently studied lower extremity malalignment and its relationship to anterior cruciate ligament injuries, finding that there was a greater correlation to injury and external tibial rotation than had previously been thought. The same malalignment as studied by Hughston[9] noted a compensatory external rotation, producing a greater pronated forefoot contact and an even greater rotation of the tibia during running or jumping activities. Although obviously leading to patellofemoral problems, the link to anterior cruciate ligament injury has not been widely accepted.

Do hormonal differences predispose athletes to injury? It is well known that female hormones effect the composition and structure of a variety of tissues. Estrogen has a significant effect on the development of bone, muscle, and connective tissue. Clearly, fluctuations in hormonal concentrations may influence the structure and composition of the anterior cruciate ligament. Expression of the estrogen and progesterone receptor proteins in target cells is a prerequisite for hormonal action. Nuclear localization of these receptors has recently been demonstrated in all cells that respond to female steroid hormones. As recently as April 1995, Liu et al,[10,11] localized both estrogen and progesterone receptor cells in the anterior cruciate ligament in ten human tissue specimens. With demonstration of these receptors in the synovium and the accompanying immunohistological localization in stromal cells in the blood vessels of the anterior cruciate ligament, these findings suggest that either directly or indirectly female hormones do indeed effect the structure of the anterior cruciate ligament.

Administration of estrogen to laboratory rats acutely decreased total tendon and fascial collagen. Long-term estrogen administration resulted in a decrease in the total amount of collagen in the joint capsules. Acute fluctuations in the serum estrogen concentration may induce changes in metabolism resulting in alterations in amount, type, and cross linkage of collagen fibers in the anterior cruciate ligament. An additional finding of this study was an increase in elastin in the aorta and hip joint capsule. During delivery of a human infant, a female in the breech position shows estrogen and relaxin hormonal changes that often produce laxity in the developmental hip. It is not difficult to conclude that the menstrual cycle and its accompanying hormonal fluctuations may definitively change the elasticity of the anterior cruciate ligament. The luteal phase of the menstrual cycle is characterized by high estrogen and relaxin levels, which may contribute to laxity of the ligament. Not suprisingly, in a Swedish study of 108 female soccer players in 1988, Möller-Neilson and Hammer[12] were able to demonstrate that players were more susceptible to injury in the premenstrual and menstrual phase of their cycles. An interesting finding of this study was a reduction in the number of injuries in the group using oral contraceptives. The implications of this study are still unclear.

It has been over 80 years since female divers were introduced into the Olympics. It has been 28 years since the introduction of Title IX collegiate programs. Medicine has made advances in treating anterior cruciate ligament injuries but is still struggling with the vulnerability of female athletes. It has defined multifactorial relationships between ground contact, limb alignment, muscle recruitment, and time to reduce anterior translation by muscle contraction. The recent recognition of hormonal influence on the anterior cruciate may be a significant factor in determining what causes anterior cruciate ligament disruption at a greater rate in female athletes.

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The Female Knee—Anterior Knee Pain

JOHN P. FULKERSON, M.D. AND ELIZABETH A. ARENDT, M.D.

ABSTRACT—There are clear differences between men and women with regard to anterior knee pain. Anatomic factors including increased pelvic width and the resulting excessive lateral thrust on the patella are significant in female predisposition to anterior knee pain. Effects of estrogen on connective tissue synthesis have been noted, but there is no clear mechanism by which this would affect anterior knee pain. Postural and sociologic factors such as wearing high heels and sitting with legs adducted can influence the incidence and severity of anterior knee pain in women.

Introduction

WHILE anterior knee pain can occur in anyone, particularly athletes, nonathletic women are clearly more prone to this problem than are nonathletic men.[1] The purpose of this treatise is to better understand the nature of anterior knee pain in women and why women are more commonly afflicted with this problem than are men. Multiple factors come into play, including psychological, anatomical, hormonal, postural, and sociologic.

The Nature of Anterior Knee Pain

Anterior knee pain is commonly caused by an abnormal alignment of the knee extensor mechanism. Problems in this area are readily accentuated by physical activity, causing stress on an already distressed patellofemoral joint which is not functioning correctly. Ultimately, imbalance in the knee extensor mechanism can lead to articular cartilage softening, chondromalacia, and eventual loss of articular cartilage due to excessive pressure on the lateral patella facet. Meanwhile, the distal central aspect of the patella may undergo degeneration related to abnormal shear stress and deficient contact early in knee flexion. Pain can evolve from articular cartilage change and resulting subchondral bone irritation, from synovitis and inflammatory response within the knee joint, and from retinacular stress causing small nerve injury, particularly in the lateral retinaculum.[2]

Another common cause of anterior knee pain is direct trauma. Most typically, anterior knee trauma occurs in accidents involving an anterior fall onto the front of the knee with a blow to the patellofemoral joint. Trauma of this nature can also occur in a dashboard injury or with any other direct trauma to the anterior knee. Twisting injuries can also cause excessive loading of the patellofemoral joint and cartilage injury. Most bothersome, however, are the injuries involving direct forceful trauma to the anterior knee. While cartilage injury at the time of such impact is a clear cause of pain in some patients, retinacular injury around the front of the knee can also be a source of patellofemoral pain that is sometimes overlooked.

The other major cause of anterior knee pain is *overuse*. Virtually, any athlete or person involved in repetitive activity can experience anterior knee pain related to repetitive stress involving the knee extensor mechanism. Similarly, repeated stress to the lateral knee involving the iliotibial band can cause pain which may mimic patellofemoral pain in some patients. Even repetitive stress around the hip or quadriceps muscle can cause

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referred pain to the anterior knee. In most patients, particularly athletes, this possible cause of pain may be implied by the nature of the individual's activity.

Structural Differences

The most obvious reason why women have more anterior knee pain than men is the difference in lower extremity orientation and alignment. Very simply, the female pelvis is larger relative to the individual's overall structure, than in males. Genetically and developmentally, this is a natural evolution related to childbirth. From the point of view of knee structure and function, however, the broader pelvis moves the hip joints further lateral relative to the midline and therefore produces an increased valgus angle from the hip to the knee and then to the ground. Bringing lower extremities toward the midline minimizes the energy expenditure necessary for normal walking.[3] In addition to a broader pelvis, females have a higher prevalence of increased femoral anteversion, which in turn affects the biomechanics of the patellofemoral joint.[4] This increase in femoral anteversion and a "wider" pelvis are also associated with increased quadriceps angle (Q angle),[5]

Because the lower extremity muscles (most notably the quadriceps muscles) follow the orientation of the femur, the female knee extensor mechanism has a greater valgus orientation than in the male, generally. This valgus load onto the patella creates a normal increase of pressure on the lateral facet of the patella, ultimately leading to the concavity of the lateral facet developmentally, through formation of the fetus, and thereafter. This trend towards increased lateral thrust on the patella according to the "Law of Valgus" is a significant factor in the difference between men and women with regard to anterior knee pain. While the increased valgus thrust on the patella in itself is not necessarily a problem, this does increase the tendency to experience excessive lateral pressure on the patella which can then lead to cartilage softening and retinacular stress around the patella and, in some people, anterior knee pain. One can see, therefore, why women are predisposed to anterior knee pain based on structure alone.

With excessive femoral anteversion, there is also a compensatory increase in external tibial torsion and accommodative pronation of the foot in order to receive a planter grade position. This triad is termed the "miserable malalignment."[6] Associated features with "miserable malalignment" syndrome can include a valgus knee, hyper mobile patella, and a hypoplastic vastus medialis obliquus (VMO) muscle. With a pronated foot, there is an accompanying increased rotation of the tibia during the stance phase of running/walking. Some authors believe that this increased rotation of the tibia leads to increased patella motion and subsequent patella overuse.[6] More recent attention has focused "miserable malalignment" farther up the kinematic chain by further examining the pelvifemoral joint.

"Miserable malalignment" syndrome can also include an anteriorly rotated pelvis, which is associated with a compensatory internal rotation of the femur.[7,8] Internal femoral rotation produces dynamic valgus knee alignment and alters the motor/muscle activity of the limb by increasing the demand on the vastus lateralis and iliotibial band. These muscle groups, now more anteriorly aligned on the malrotated limb, act as the primary extensors of the knee. This pelvifemoral dysfunction can also be associated with further compensatory alterations up the kinetic chain with an increase in lumbar lordosis, an increased in thoracic kyphosis, cervical extension and a forward head. Thus, there can be an alteration in the orchestration of neuromuscular control and postural muscle activity, leading to a loss of coordinated muscle activity between the lumbopelvic region and the hip. The individual is then unable to maintain pelvic stability. Although no population-based studies on this "miserable malalignment" exist, certainly a popular opinion shared by both orthopaedists and therapists is that it is more prevalent in females.

Muscular/Strengthening Differences

Bennett has pointed out the differences in vastus medialis obliquus orientation in females which may make the patella more prone to instability.[9] Diminished support for the patella by the medial dynamic stabilizer (VMO) together with an overall increased valgus thrust, places the female patella at particular risk for subluxation and excessive strain on the patella stabilizers (retinaculum).

Quadriceps strengthening activities have long been held to be the cornerstone of treatment for patellofemoral pain and dysfunction. We are just beginning to investigate and recognize muscular differences between men and women, and how they effect the development of fitness. Gender-specific differences in body composition and size have been readily observed and have been attributed to differences in sex hormones on muscular and skeletal development.[10] Although studies differ in conclusions, gender-related differences in strength training have been reported.[11] Whether gender-related differences in strength training are related to patellofemoral joint pain and injuries is speculative, but certainly the critical role of strength training in treatment of patellofemoral joint disorders is uncontested. Quadriceps strengthening activities have been classically utilized, with more recent emphasis on closed-chained activities which emphasize eccentric contractions. More proximal in the kinematic chain, muscular maintenance of pelvic stability is key.

The gluteus maximus and hamstrings play an important role in posteriorly rotating the pelvis and controlling limb activity, in particular rotation.[12] The hamstrings may further play a role in maintaining limb stability (patella stability) by controlling internal and external rotation of the tibia.[8] Abductor strength helps to maintain pelvic stability in single leg stance and control rotational alignment of the limb. These components are critical to analyze and correct/strengthen in evaluation of patellofemoral pain, particularly in women because of the notable vulnerability of the kinetic chain as outlined.

Social Factors

Kowal pointed out that inadequate conditioning and relatively greater body weight and fat percent as well as limited leg strength, will predispose women to a greater risk of injury in Army recruits.[13] In a similar study, Cox and Lenz[14] found also that women were more prone to injury relative to lower initial fitness at the time of entering the U.S. Naval Academy. Cox stated however, that the "number of stress-related visits to sick-call" diminished with time and as the women midshipmen "became accustomed to minor injuries and health problems and learned to ignore them." Conditioning and tolerance of pain, then, have been implicated as factors influencing the increased incidence of anterior knee pain in women.

Other sociologic issues were raised by Bergenudd, Nilsson and Lindgarde.[15] Bergenudd found that average income was less in those with knee pain in a study of 574 residents in Malmo, Sweden. In another sociologic/demographic study, McAlindon and coworkers established that knee pain is more common in women (27% incidence) and that women were more likely to report a disability, particularly with increasing age in a study of 2,102 people in Bristol, England.[16] In another English study, Cooper et al found that repeated knee-bending predisposes to anterior knee pain.[17] One may speculate therefore, that secretarial work and clerical work in which women have typically been more frequently employed than men, may introduce other predisposing factors in the incidence of anterior knee pain.

Other characteristics of women that may predispose to anterior knee include postural factors, such as sitting in the hip-adducted position. Sitting with legs adducted produces an increased valgus stress at the knee. Since women already have a tendency toward lateral stress on the patella based on pelvic width, sitting with legs adducted further accentuates the valgus moment at the knee and may be another contributing factor in causing excessive lateral pressure at the patella and resulting anterior knee pain.

Wearing heels moves the body center of gravity forward which requires "sitting back" slightly, thereby necessitating slight knee flexion in order to maintain balance while wearing high heels. This slight knee flexion, together with adducted knee gait and relatively increased pelvic width, further accentuate load on the lateral patella facet during normal gait.

Hormonal Factors

Women experience hormonal fluctuations throughout life which inevitably affect body structure including bone and ligaments. The effects of estrogen, in particular on bone, have been well established.[18] Liu has established more recently that local estrogen increases can diminish collagen synthesis, thereby reducing connective tissue structure and strength.[19] While there has been some implication that this might make women more prone to cruciate ligament injury, there has been no specific evidence of an effect on the knee extensor mechanism. In fact, reduction of connective tissue synthesis or increased flexibility around the anterior knee and thereby less patellofemoral compression might even ameliorate patellofemoral pressure. This is an area about which very little is known.

Discussion and Conclusions

It is most appropriate, with regard to anterior knee pain, to recognize male/female differences and how these effect pain around the knee. There is little doubt that women differ from men structurally, sociologically, and hormonally. The differences are not subtle, in general. Since the knee is uniquely prone to any changes which affect posture, gait, or lower extremity structure, it is not surprising that women have a higher incidence of anterior knee pain related to the factors outlined in this treatise. While there is little that can be done about the structural differences between men and women, other than conditioning to help increase patella support, it is certainly feasible to modify some sociologic factors. Physical conditioning, in particular, seems to help in diminishing reports of musculoskeletal disability among women. When anterior knee pain becomes evident, diminishing use of high heels, adducted lower extremity posture, and aggravating occupational activities should help in the management of patellofemoral pain in women. Focus on the kinetic chain in women is particularly important, such that alterations and malfunctions related to structural differences in women might be effectively controlled.

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Evaluating and Managing Athletes with Valvular Heart Disease

PAUL D. THOMPSON, M.D.

Introduction

AORTIC stenosis (AS) was implicated in 8% of the nontraumatic, exertion-related deaths reported by Jokl and Melzer in their review of medical reports published between 1921 and 1939.[1] Unfortunately, despite the widespread appreciation of the dangers of exertion with valvular AS, this entity remains an important cause of exercise-related cardiac events and still accounts for 4% of sudden deaths among young athletes.[2,3] Furthermore, the evaluation of cardiac murmurs and valvular abnormalities remains a frequent reason for cardiology consultation. This paper will address the evaluation and management of valvular heart disease in competitive and recreational athletes.

Evaluating valvular heart disease in athletes is not easy. The physiologic cardiac adaptations to exercise training create innocent flow murmurs which are difficult to differentiate from normal. Blood flow is laminar and without turbulence until a critical Reynolds number (Re) is exceeded. Re is determined by the following formula

$$\mathrm{Re} = \frac{\text{Average Velocity x tube diameter x fluid density}}{\text{Fluid viscosity}}$$ [4]

Laminar flow is disrupted above an Re of 2,000 creating turbulence and murmurs. Endurance exercise training reduces resting heart rate but enhances cardiac performance. Since oxygen demand determines cardiac output and since resting oxygen demand remains relatively constant before and after exercise training, resting cardiac output is also relatively constant. This means that the same cardiac output is delivered via a slower heart rate and a larger stroke volume. Much of the larger stroke volume is delivered more vigorously in early systole by a more dynamic ventricle. This increases blood velocity. Neither the pulmonic nor aortic valve orifice increases with exercise training and reductions in blood density with training are not sufficient to prevent the development of turbulence and cardiac "flow murmurs." Such flow murmurs in young athletes are due to flow across the pulmonic valve and often vary with respiration. Athletes aged ≥50 years may have mild sclerosis of the aortic valve leaflets. Flow murmurs in older endurance athletes are often due to aortic valve turbulence from the physiologic changes of exercise training and the aortic valve sclerosis. These murmurs in older athletes are less "innocent" because they may progress to important AS especially in athletes with other risk factors for atherosclerosis such as hypercholesterolemia.[5,6] Treatment of these risk factors may reduce the development of important AS but this has not been studied. Nevertheless, we often recommend 3-hydroxy-3-methylglutaryl co-enzyme A (HMG Co A) reductase inhibitors in patients with noncritical AS of the adult in the hope of preventing such progression.

Further complicating the treatment of valvular disease in athletes is the lack of studies evaluating various management strategies in such patients. Indeed, there are few trials of valvular heart disease treatment approaches in nonathletic populations, and much of the available literature is based on single center reports.[7] An additional problem is that athletes, because of their exercise activity, may present at an earlier disease stage than other patients. This is a major issue because the appearance of symptoms is an important indicator that valvular repair or replacement may be necessary. Physicians do not want to inter-

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vene too soon in athletes with symptoms produced by extreme exertion because of the immediate risk of surgery, the finite life of many valvular protheses, and the need for life-long anticoagulant therapy after some valve replacements.

The athlete's attitude can also complicate the decision. Some athletes deny symptoms and try to avoid surgery even with life-threatening conditions. Others prefer early intervention if waiting would mean restricted physical activity or reduced athletic performance. The latter patients need to understand the immediate risks of surgery *vs* its long-term benefits and also the fact that few valvular repair procedures produce the performance characteristics of a normal native valve. In the final analysis there is no substitute for a sympathetic explanation and definitive recommendations as to how and why the athlete should proceed in his or her best interest. We often recommend second opinions if the athlete seems reluctant to follow a recommended plan. We provide referrals and scheduling assistance to ensure the athlete is evaluated by a reputable physician at a recognized institution.

The Cardiac Examination of Athletes for Valvular Heart Disease

A complete description of the cardiac examination of athletes is beyond the scope of this paper. The following section emphasizes clinical principles useful in evaluating athletes for suspected valvular disease.

The examination of athletes with possible valvular disease is more complete than the often cursory examination routinely performed as part of the preparticipation physical. All cardiac evaluations should start with an accurate blood pressure measurement in both arms. The blood pressure should be measured by someone trained to avoid the digit selection and rounding to tens that is common in most blood pressure "determinations." The average systolic pressure is several millimeters higher in the right arm probably because of the more direct course of the pulse wave to the innominate and right subclavian arteries. A systolic pressure >15 mm higher in the right arm, if associated with a systolic ejection murmur, suggests supravalvular AS[8] which is an occasional cause of exercise-related sudden cardiac death.[3] A widened pulse pressure suggests a regurgitant murmur such as aortic insufficiency (AI). The high-pitched diastolic murmur of AI can be difficult to hear without special attention, but a pulse pressure >40 mm Hg should prompt a careful search for this murmur with the patient leaning forward and holding his or her breath at end expiration. The AI murmur is often best heard over the sternum because bone transmits the high-frequency murmur more readily.

Elevated blood pressure in a young athlete requires simultaneous palpation of the radial and femoral pulses to exclude a radial-femoral pulse delay suggestive of aortic coarctation. It is often incorrectly assumed that the mere presence of a femoral pulse excludes coarctation, but some patients can reconstitute a palpable femoral pulse via collaterals. In these patients it is the delayed impulse between the radial (or brachial) and femoral pulse that suggests the diagnosis.[9]

Evaluating the carotid pulse is the most important palpation maneuver in athletes because AS remains a frequent, easily identified cause of sudden cardiac death. A carotid pulse that is low volume, has a slow upstroke, or is difficult to locate should increase suspicion of important AS.

Cardiac auscultation is an important part of evaluating valvular disease in athletes even in the present era of echocardiography. It is possible to both over and underestimate the severity of valvular lesions with either echocardiography or the physical examination. The best decisions are made when the results of several examination techniques are compared for agreement or discrepancies. The physician should avoid relying exclusively on clinical, echocardiographic, or catheterization data alone. Consequently the physical examination is a key component both in deciding who requires further study and in evaluating the additional data.

During cardiac auscultation the examiner should ignore any obvious murmur and proceed with a sequential systematic examination of the heart sounds, possible gallops and clicks, diastolic murmurs, and finally systolic murmurs. If too much attention is given initially to any obvious finding, such as a systolic murmur, it is often difficult to appreciate more subtle findings that can contribute to the correct diagnosis. The auscultatory examination should start with an assessment of the intensity of S1 which is produced by closure of the mitral and tricuspid valves. The intensity of S1 is partly determined by the degree of leaflet separation at the onset of ventricular contraction. If the leaflets are widely separated to accommodate delayed ventricular filling such as with mitral stenosis, the valve leaflets travel farther at the onset of systole and S1 is loud. In contrast, if the leaflets have been partially closed by the regurgitant jet of AI, S1 is soft. Both AI and isolated mitral stenosis (MS) are notoriously difficult to hear and often require special maneuvers. The intensity of S1 helps indicate when these additional maneuvers are required.

S2 is produced by closure of the aortic followed by the pulmonic valves. During inspiration, filling of the right ventricle is augmented. The larger volume of blood in the right ventricle shifts the intraventricular septum leftward, compromises (LV) filling, and reduces the LV stroke volume.[10] This hastens aortic closure so that the aortic valve closes earlier in the cardiac cycle during inspiration. On the right side, the larger right ventricular volume delays pulmonic valve closure. Both the earlier aortic closure and the delayed pulmonic closure increase the splitting of S2 during inspiration. This is best appreciated in the seated position. In the supine position venous return from the legs can nearly maximize right ventricular filling so that any additional increase in the splitting of S2 is difficult to detect. This is especially true in endurance athletes whose plasma volume can average 800 ml larger than comparison subjects.[11] Part of this increased plasma volume shifts to the central circulation in the supine position. During the expiratory phase of the cardiac cycle, aortic and pulmonic closure occur almost simultaneously and S2 should be single or nearly so. If there is an intracardiac connection between the right and left sides of the heart, such as an atrial septal defect (ASD), there is no or little differential in right and left cardiac filling during respiration. Right ventricular filling is also increased from left to right intracardiac shunting which increases the right ventricular stroke volume. S2, therefore, is often widely split, does not move during respiration, and fails to close during expiration. ASD's often are accompanied by a systolic murmur that has many of the characteristics of a pulmonic flow murmur. The behavior of S2 is useful in separating these two conditions.

The examiner should then listen in diastole for an S3 or S4 gallop and in systole for any ejection clicks suggestive of pulmonic or aortic valvular stenosis or any midsystolic clicks suggestive of mitral valve prolapse. Many athletes have S3 and S4 gallops which are of no importance unless the gallops are loud or associated with other abnormalities. The examiner should then listen in diastole for the murmurs of AI and MS and finally to any systolic murmurs. Systole should be examined last because these murmurs are usually the most obvious.

The initial auscultatory exam is performed with the athlete seated. As discussed above this reduces the chance of producing a flow murmur, facilitates hearing AI, and maximizes splitting of the second sound. In addition, the upright position reduces ventricular volume and increases the chance of detecting a murmur in obstructive hypertrophic cardiomyopathy. The sequence of auscultation is then repeated in the supine and left lateral positions. The later position facilitates detecting the murmurs of mitral stenosis and regurgitation. If there is any suspicion of either hypertrophic cardiomyopathy or mitral valve prolapse, the athletes should also be examined standing and squatting. Variations in ventricular volume alter the timing of midsystolic clicks in mitral valve prolapse and thereby facilitate its identification. Squatting increases ventricular afterload which decrease the murmur of obstructive hypertrophic cardiomyopathy whereas standing often increases the murmur if obstruction is present.

The electrocardiogram (ECG) in athletes is often not useful in following those with valvular abnormalities because athletes may normally show evidence of right ventricular and LV enlargement, T wave abnormalities, and atrial abnormalities. Nevertheless, the ECG is a low-cost alternative in following asymptomatic or mildly symptomatic athletes between routine echocardiographic studies. Charting the ECG voltage in leads V5 and V6 as well as the T wave configuration in athletes with AI or mitral regurgitation (MR) helps identify changes in the cardiac status. Any changes in ECG voltage or T wave orientation should prompt repeat echocardiographic examination to ensure that the lesion has not progressed unexpectedly.

Doppler echocardiography is both the primary mechanism used to evaluate valvular lesions at presentation and to follow these conditions over time. Most cardiologists routinely refer athletes with possible valvular involvement for echocardiography unless the murmur is unquestionably a flow murmur on careful physical examination. Flow murmurs in young and older athletes are generally grade 1 or 2 in intensity, systolic, associated with normal splitting of S2, not associated with other abnormal sounds or diastolic murmurs, and not altered by the Valsalva maneuver.[7] The major limitation with Doppler echocardiography is that it is often too sensitive and detects trivial MR in 69% of athletes and trivial Tricuspio regurgitation in 76%.[12] Physicians unaware of this fact and uncertain of the findings on physical examination may overestimate the importance of the echocardiographic results.

The Management of Athletes with Valvular Disease

The American College of Cardiology and the American Heart Association published "Guidelines for the Management of Patients with Valvular Heart Disease" in 1998. This document provides an excellent summary[7] on how to manage the general patient with this problem. "Recommendations for Determining Eligibility for Competition in Athletes with Cardiovascular Abnormalities, the 26th Bethesda Conference" were published by the same two organizations in 1994 and included a section on athletes with acquired valvular heart disease.[13] The following section will summarize issues from these two documents and provide additional information relevant to physicians caring for athletes.

Valvular Aortic Stenosis (AS)

Valvular aortic stenosis (AS) remains a frequent cause of exertion-related sudden death in young athletes and an occasional cause of exercise-related deaths in adults. The normal aortic valve orifice is approximately 3 cm to 4 cm^2 and must be reduced by 75% of normal before causing significant hemodynamic obstruction.[7] Mild, moderate, and severe AS are classified as an aortic valve area >1.5, 1–1.5, and <1.0 cm^2 respectively. Severe AS should produce a mean resting gradient of at least 50 mm Hg if cardiac output is normal. These values are not normalized for body surface area. The hemodynamic significance of any specified aortic valve area depends on the cardiac output. Since muscle mass is a determinant of resting cardiac output, larger individuals may have more severe hemodynamic impairment despite a larger absolute aortic valve area. This may be an issue in athletes with an increased body size and muscle mass. Consequently, the calculated aortic valve area and classification of the severity of disease should be considered as only estimates and must be correlated with other findings.

AS is typified by a long asymptomatic period. Common symptoms of severe AS when they do occur include angina, syncope or near syncope, and heart failure. Sudden cardiac death may also be the first symptom, but this is rare. This presentation is more frequent in younger subjects with congenital AS, but does occur in adults. The incidence of sudden death without prior symptoms is estimated to be <1% of AS patients per year.[7] The rate of narrowing of the aortic valve in individual patients is highly variable and unpredictable. Over 50% of patients with AS show little or no progression over 3 to 9 years, but the average rate of aortic valve narrowing is 0.12 cm^2 per year.[7] Consequently, patients with AS, once identified, require careful follow-up.

The initial evaluation of AS patients requires a physical examination, ECG, and Doppler echocardiographic study. Estimation of the severity of AS is based on an evaluation of the results from all three examination modalities although the aortic valve area is based primarily on the Doppler echocardiographic results. Cardiac catheterization is required to help clarify the severity of the AS if the noninvasive testing and clinical evaluations are contradictory. Even cardiac catheterization can incorrectly asses the aortic valve area especially if the oxygen uptake value used to calculate the Fick cardiac output is estimated from body size and not directly measured by expired gas collection. In addition, the degree of stenosis can be overestimated by gradient calculations with concomitant AI since the regurgitant volume increases stoke volume beyond that measured by the Fick calculation as forward flow. Coronary angiography is required before valve surgery to detect any coronary artery disease.

Athletes with mild AS can participate in all competitive sports if they are asymptomatic and have a normal exercise response.[13] Athletes with moderate AS should be restricted to sports with low static and dynamic requirements (See Table for Examples of Intensity Classifications) although selected athletes can participate in moderate static and dynamic intensity sports provided they have a normal ST segment, cardiac rhythm, and blood pressure response to exercise testing and are not symptomatic. Athletes with severe AS should be restricted from competitive athletics even if they are asymptomatic. Exercise

Table 1.—Examples of the Classification of Sports

	Low Dynamic	**Moderate Dynamic**	**High Dynamic**
Low static:	Bowling Golf Curling	Baseball Softball Doubles tennis Recreational volleyball	Distance running Tennis, squash
Moderate static:	Motocross Archery	Sprinting American football Figure Skating	Basketball Ice hockey Lacrosse Swimming
High Static:	Rock climbing Gymnastics Waterskiing Windsurfing Weight lifting	Wrestling Body building Downhill skiing	Boxing Cycling Rowing, canoeing Speed skating

This table is modified from that of Mitchell et al. [29] Dynamic exercise refers to "aerobic" activities whereas Static refers to exercise requiring sustained muscle contraction. Any rigid separation of sports into dynamic and static components is arbitrary because modern training for most sports requires both static and dynamic exertion.

testing in these athletes is useful in documenting that they are truly without symptoms and to ensure that they do not develop exercise-induced hypotension. Exercise-induced hypotension is a bad prognostic sign and should prompt consideration for aortic valve surgery even in the absence of symptoms.

Aortic valve replacement is advocated for patients with severe AS once symptoms appear. This decision can be more difficult in athletes; they are at an undefined, but definite risk of sudden death during exercise, and they may present with symptoms earlier in their disease course because vigorous exercise provokes symptoms. There are no studies to address the issue as to whether valve replacement can be delayed if symptoms occur only with extreme exertion. Clinicians must balance the immediate and delayed risk of valve replacement against the risks of not proceeding. Despite such considerations, our bias is to proceed fairly promptly to surgery in athletes with severe AS at the onset of symptoms. There is little additional benefit to waiting since surgery is inevitable in this situation. Also, there is the risk inherent in waiting and the possibility that LV hypertrophy will develop or worsen. LV hypertrophy is in its own right a risk factor for sudden cardiac death in the general population and among athletes.[14]

The decision is considerably more complex in athletes who are asymptomatic and yet have severe AS. It is generally thought that the immediate risk of surgery and the risks associated with a valvular prosthesis such as anticoagulation outweigh the benefits of proceeding. Among the asymptomatic patient group, those with exercise-induced hypotension, systolic dysfunction, and marked LV hypertrophy are probably at increased risk and should be considered for valve replacement. Some experts also consider exercise ST depression to represent an additional risk factor and suggest that sudden death is extremely rare in children with aortic stenosis who have no ST depression with exercise.[15] Asymptomatic athletes with severe AS should undergo exercise testing to document their lack of symptoms and should be restricted from competing and training. Our bias even in these asymptomatic athletes is to proceed to aortic valve replacement in the near future for the following reasons: surgery has relatively low risk in healthy subjects; prolonged pressure overload has deleterious effects on the left ventricle; many active patients are reluctant to avoid vigorous exercise for a prolonged period of time.

Chronic Aortic Insufficiency (AI)

Chronic AI represents a combined volume and pressure overload on the left ventricle. Chronic AI can be well-tolerated for decades, but many patients with moderate and severe regurgitation experience a gradual progression from normal to abnormal LV function characterized by LV enlargement, reduced contractility, and decreased ejection fraction. Most patients developing LV dysfunction present with early symptoms of heart failure including exercise intolerance, dyspnea, and exercise-induced presyncope before LV function is severe. Some patients, however, do not develop sentinel symptoms and present with marked LV enlargement and a severely dysfunctional left ventricle.[7]

Early in the course of left ventricular dysfunction the left ventricle (LV) can recover after aortic valve replacement probably because the dysfunction was primarily due to volume overload. If the volume overload has been persistent and produced severe chamber enlargement with LV dysfunction, the myocardial dysfunction is not wholly reversible despite correction of the valvular lesion. Consequently, the severity of LV dilatation and dysfunction are the key determinants of postoperative ventricular function and survival.

Athletes with AI should be carefully questioned for exercise-induced signs of early heart failure. The physical examination should include a search for stigmata of Marfan syndrome since many Marfan patients have important AI. They should also have a baseline ECG, echocardiogram with careful measurement of LV and left atrial diameters, and an exercise stress test. The baseline ECG is used to evaluate LV voltage and T wave changes over time. The exercise test is to document functional capacity and the absence of symptoms and exercise-induced arrhythmia. It is useful to chart the ECG voltage and T waves in leads II, AVL, V5, and V6 as well as the echocardiographic LV and left atrial dimensions. These can then be followed sequentially for evidence of early LV dysfunction.

The general population of patients with moderate to severe AI, no symptoms, and normal LV function has a reasonably good near-term prognosis. Among seven studies including 490 patients who were followed for a mean of 6.4 years, sudden death occurred in only six and progression to symptoms or LV dysfunction occurred at a rate of 4.3% per annum.[7] This is not a trivial rate of progression, however, since 21% of patients worsened over five years. It is not clear how exercise training would affect these results. Dynamic exercise acutely increases heart rate which shortens diastole and the time available for aortic regurgitation. On the other hand, exercise training in normals induces bradycardia which prolongs AI and theoretically hastens LV dysfunction. We are unaware of studies that have examined the effects of endurance training in AI patients so the ultimate effect of athletic training and competition on AI has not been determined. Patients with important AI are routinely advised to avoid static exertion because the increased afterload acutely increases aortic regurgitation, although if static effort actually affects prognosis has not been examined.

Athletes with mild or moderate AI, minimal LV enlargement,They should be cautioned to report any new symptoms and they should have a repeat echocardiogram six to 12 months after the initial visit to document disease stability and then every two to three years thereafter.[7]

Selected athletes with moderate AI and moderate LV enlargement can participate in sports requiring moderate static and high dynamic effort.[13] These patients should also be cautioned to report new symptoms, have a repeat echocardiogram six months after the initial visit to document stability, and repeat evaluations yearly thereafter.[7]

Asymptomatic athletes with severe AI should be restricted from competition and training and followed closely.[13] They should have a repeat echocardiogram three months after the initial visit and every six to 12 months subsequently. Asymptomatic athletes with moderate to severe AI and LV dysfunction or marked dilatation due to the AI should undergo valve replacement.[7] LV dysfunction is defined as an ejection fraction (LVEF) of <50%.[7] Marked enlargement is defined as a LV end diastolic volume >75 mm or and end systolic volume >55.[7] Women with AI develop symptoms with less severe LV dysfunction and enlargement than men[7] suggesting that smaller individuals may require valve replacement at smaller ventricular volumes. Aortic valve replacement should be strongly considered if there is progressive LV dilation and dysfunction in asymptomatic patients even if the LV does not achieve the above parameters. A LVEF of 50% already represents considerable LV dysfunction in AI patients because the normal ventricular response to AI is to increase the LVEF above the normal 55 to 65%. Also, once the LV is markedly dilated there is the possibility that the LV has been permanently altered and will not return to normal function.

Athletes with severe AI who are symptomatic should undergo AVR. The timing of the AVR can be varied depending on the effort level required to produce symptoms as well as LV function and dimensions.

It is generally recommended that patients with moderate to severe AI and systolic hypertension should be treated with afterload reducing agents such as hydralazine, nifedipine, or angiotensin converting enzyme (ACE) inhibitors to achieve a normal systolic pressure. There is no conclusive evidence that treating normotensive patients with AI is beneficial. Nevertheless, we routinely place patients with moderate to severe AI on ACE inhibitors in the hope of delaying the development of LV dysfunction.

Aortic Valve Replacement in Athletes

The management of athletes after valvular replacement was discussed in the 26th Bethesda Conference.[13] In general athletes with normal LV function after aortic valve replacement can participate in low intensity sports with selected athletes participating in moderate intensity static and dynamic sports. Athletes taking anticoagulants should not engage in sports with any risk of bodily contact. These recommendations[13] reflect concern about the aortic valve replacement techniques commonly available at that time. Until recently nearly all aortic valve replacements were performed using a porcine heterograph, a cadaveric homograph, or a mechanical prosthesis. The mechanical prostheses required life-long anticoagulation and had an effective valve area of only 1.2 to 3.2 cm2.[16] Both the hetero and homographs required anticoagulation for only three months unless there were other factors predisposing to systemic embolization. Unfortunately, the techniques to preserve these bioprostheses affected their durability and 30% of heterographs and 10-20% of homographs had to be replaced in 10-20 years.[16] Bioprosthesis failures were most frequent in patients under age 40 years.[16]

In 1967 Ross described an autograft approach to aortic valve replacement in which the normal pulmonic valve was used to replace the diseased aortic valve. There was a fairly high early mortality rate to the operation of 7.4% over the first 24 years of its use.[17] Ross attributed this to the steep learning curve required for the operation.[17] In 1976 the procedure was altered to using the pulmonic valve with the pulmonic trunk in the replacement. This advancement eliminated many of the technical problems inherent in the earlier technique and helped reduce the current mortality rate to <1%.[17] The Ross procedure has multiple advantages over other aortic valve replacement techniques. The tissue used is viable because it had not been subjected to sterilization and preservation procedures required for hetero and homographs. This viability means that the replacement should last indefinitely and the new aortic root can actually enlarge with somatic growth of the child.[18] As with heterografts and homografts, long-term anticoagulation is not required and the hemodynamic performance of the autograft is equal or superior to all other replacements.[17] These advantages have lead many surgeons to conclude that the Ross procedure is the treatment of choice in otherwise healthy subjects with more than a 20-year life expectancy.[17] The procedure is especially attractive in athletes. Several high-profile athletes have competed successfully after a Ross replacement including Jesse Sapolo, the center of the San Francisco 49ers American football team.[19]

There are limitations to this operation. It is not indicated for Marfan syndrome patients or other patients with connective tissue disorders since the same process could affect the pulmonic valve in the aortic position. The operation is complicated and quite often long since it is really a "double valve procedure for a single valve disease"[17] and in addition requires reimplantation of the coronary arteries into the autograft. Finally it has not been widely used and few surgeons have extensive experience with the technique. It is not clear that the excellent published mortality results will be replicated by less experienced surgeons. Nevertheless, if performed by an experienced operating team, the Ross procedure is probably the aortic valve replacement of choice for children, physiologically young adults, and athletes.

Mitral Stenosis (MS)

Mitral stenosis (MS) is almost always a consequence of rheumatic fever. Severe MS is rarely seen in competitive athletes. The increase in heart rate with exercise decreases the ventricular diastolic filling time, increasing left atrial, pulmonary capillary wedge, and pulmonary artery pressures. This produces exercise dyspnea and rarely exercise-induced pulmonary edema.

Once MS is suspected the evaluation of severity is primarily based on symptoms and Doppler echocardiographic results. Doppler echocardiography can accurately estimate mitral valve area in isolated MS and can also estimate pulmonary artery systolic pressure from the velocity of the tricuspid regurgitant jet. The same technique can be used with exercise to determine changes in pulmonary artery pressure with exertion. The echocardiographic study is also used to evaluate the approach to operative intervention. Catheter valvotomy using a venous approach across the atrial septum is often possible if the mitral leaflets are pliable and have minimal subvalvular commissural fusion.[7] A mitral valve that appears favorable to percutaneous valvotomy generally permits a more aggressive approach in patients with Doppler evidence of important MS and mild symptoms.

The normal mitral valve area is 4 to 5 cm^2. A reduction to 2.5 cm^2 is required for symptoms.[7] MS is generally classified as follows[13] :

	Valve Area (cm2)	Pulmonary Arterial Systolic Pressure (mm Hg)
Mild	>1.5	<35
Moderate	1.1-1.4	<50
Severe	<1.1	>50

The Bethesda Conference recommends that athletes in normal sinus rhythm with mild MS and no symptoms can participate in all sports.[13] Athletes with mild MS and atrial fibrillation or with moderate MS can participate in moderate static and dynamic sports as long as their exercise pulmonary systolic pressure remains below 50 mm Hg. If the pulmonary pressure exceeds 50, these athletes should be restricted to moderate static and low dynamic sports. Patients with moderate or severe MS plus symptoms on moderate exertion should be considered for percutaneous valvotomy if they have suitable anatomy or open valve repair or replacement if their anatomy appears unfavorable for a percutaneous approach.[7] Athletes with mild MS and symptoms appearing with vigorous exertion could also be considered for percutaneous valve repair depending on the clinical circumstances. There is no evidence that this will improve their long-term prognosis. It is also possible that percutaneous valvotomy will produce significant MR and make a minimally symptomatic patient more symptomatic.

Chronic Mitral Regurgitation (MR)

In contrast to MS, the common etiologies of chronic MR are multiple and include mitral valve prolapse, healed endocarditis, rheumatic heart disease, Marfan syndrome, and ischemic papillary muscle dysfunction. The LV adapts to chronic MR by increasing its end diastolic volume, but sustained volume overload in severe MR eventually leads to LV systolic dysfunction. The LV afterload in chronic MR is reduced because the LV can "unload" into the relatively low resistance left atrium. This reduced afterload can mask LV dysfunction because the LV ejection fraction may be near normal. In chronic MR, however, the "normal" LV ejection fraction (LVEF) should be in excess of 60%. Mitral valve repair or replacement removes this low pressure escape for LV ejection and may unmask a dysfunctional left ventricle. Survival after mitral valve repair is reduced in patients whose preoperative LVEF is <60%. [7]

The evaluation of patients with MR includes a history, a physical examination, an ECG, a Doppler echocardiogram, and a stress test. The history and exercise test should attempt to elicit symptoms of early heart failure since there is consensus that patients with symptoms should proceed to corrective surgery. Doppler echocardiography study is useful in defining LV dimensions and performance, left atrial size, pulmonary systolic pressure, and the severity of the MR. The Doppler echocardiographic study alone is not sufficient to determine the MR severity since the regurgitant jet can be missed and the interpretation is somewhat subjective. Consequently, the echo results should be correlated with other findings. An exercise echocardiographic study may be especially useful in athletes with symptoms and mild to moderate MR at rest. The increased heart rate during exercise increases the frequency of regurgitation and decreases LV diastolic filling time. Both factors may increase exercise pulmonary pressure and account for the symptoms.

Symptomatic athletes with moderate or severe MR should undergo corrective surgery. The timing of the operation can vary depending on the severity of the symptoms and cardiac dysfunction, but there is little benefit in waiting once symptoms have appeared and can be unequivocally attributed to the MR. Athletes with normal sinus rhythm and normal LV function may participate in all sports.[13] They should have a repeat echo in six months to document stability of the MR and then every one to two years thereafter. Asymptomatic athletes with normal LV function and mild LV enlargement can participate in moderate static and moderate dynamic activities. Selected athletes with these characteristics can participate in all sports. All patients with mild LV enlargement should be echoed in three months to establish a stable clinical course and then yearly thereafter.

Mitral valve repair is the procedure of choice since it avoids long-term anticoagulation and preserves the mitral valve apparatus. Preserving the papillary muscles and chordal structures helps preserve LV function.[7] The next best choice is valve replacement preserving the valve apparatus.

Athletes with LV dysfunction or significant LV enlargement should proceed to corrective surgery. The standard criteria for LV function and surgical repair are an LVEF <60% or a LV end systolic diameter >45mm.[7] Nevertheless, athletes with progressive increases in their LV dimensions or decreases in LVEF should also be referred for surgery. Many centers recommend mitral repair for severe MR even in asymptomatic patients without LV changes if there is a high chance the valve can be repaired.[20] Similarly, some centers strongly consider mitral valve surgery if atrial fibrillation has occurred even transiently.[7] The appearance of atrial fibrillation indicates left atrial dysfunction. Atrial fibrillation may also become permanent if the left atrium continues to face a volume and pressure overload. Chronic atrial fibrillation requires long-term anticoagulation thereby eliminating one of the benefits of valvular repair.

The decision to intervene in severe MR with no or minimal symptoms depends greatly on the skill in valve repair of the surgeon. Valve repair has many benefits over replacement, but failure of the repair almost always leads to replacement. Consequently, the ability of available surgeons influences the decision when to proceed to surgery.

There is only theoretical support for the use of afterload reducing agents in normotensive patients with moderate to severe MR. Despite this we routinely recommend ACE inhibitors to such patients in the hope of preserving normal LV function until corrective surgery.

Exercise After Mitral Valve Surgery

Athletes with mitral valve replacements with normal ventricular function who are not taking anticoagulant medications can participate in moderate dynamic and static sports.[13] Athletes on anticoagulant medications should avoid sports with a high risk of bodily collision.[13] Athletes who have undergone mitral valve repair can participate in all competitive sports if they have no or minimal MR and normal LV function. Since many of the young athletes who require mitral repair have mitral valve prolapse and since bodily collision can rupture elongated chordae tendinae, we prohibit contact sports in mitral valve prolapse patients who have undergone valvular repair.

Mitral Valve Prolapse (MVP)

Mitral valve prolapse (MVP) is the most common cause of significant MR in the United States and affects approximately 4% to 6% of the population.[7] MVP has also been one of the most frequently over-diagnosed cardiac conditions although this is changing with the use of stricter diagnostic echocardiographic criteria. The prognosis of MVP is generally benign. It is a rare cause of sudden cardiac death in the general population and responsible for only 1% of exercise-related cardiac deaths among high school and college athletes.[3] Atypical chest discomfort is a common complaint in individuals eventually diagnosed with mitral valve prolapse, but rarely has important sequelae. Palpitations from premature atrial or ventricular beats are also frequent in MVP patients. The important cardiac complications associated with MVP include cardiac arrhythmia, syncope, and sudden death; endocarditis; and significant MR usually produced by chordal rupture. Neurological events can also occur in MVP patients probably from cardiac emboli.[21,22] The serious cardiac complications are more frequent in patients with more extensive valvular pathology including redundant and thickened valve leaflets, a systolic murmur, and left atrial enlargement.[23,24]

MVP is usually detected during a routine physical examination or in a patient undergoing echocardiography as part of an evaluation for chest pain or palpitations. The characteristic auscultatory findings include a midsystolic click and/or a late systolic murmur. Classically the click and murmur are variable with position, respiration, and other maneuvers. This variability often leads to the diagnosis. Maneuvers that reduce ventricular volume such as standing move the click and the start of the murmur earlier in systole whereas maneuvers that increase ventricular volume delay the onset of the click and murmur. Since MVP is common in Marfan syndrome, the physical examination of patients with MVP should include a search for stigmata of this condition. There is no requirement for echocardiographic confirmation of MVP if the findings are classic, the murmur does not indicate severe regurgitation, and the patient is asymptomatic. Some authorities recommend echocardiography in all subjects to detect valvular abnormalities associated with a more serious prognosis.[7] If echocardiography is performed at baseline, patients with moderate MR, left atrial enlargement, and thick or redundant leaflets should have the study repeated at one to two year intervals. Patients without evidence of serious valvular pathology should be restudied approximately every five years.

The management of athletes with MVP depends on the severity of the MR, the presence of symptoms, and the pathological appearance of the valve. Athletes with moderate or severe MR should be evaluated and followed as discussed in the section on MR. According to the Bethesda Conference,[25] the usual athlete with MVP can participate in all competitive sports. Athletes with MVP and arrhythmogenic syncope, a family history of sudden cardiac death associated with MVP, repetitive supraventricular or ventricular arrhythmia, or prior embolic events should be restricted to low intensity dynamic and static sports.[25] Athletes with supraventricular arrhythmia can usually be well-managed with low- dose beta adrenergic blockade or with a strong chronotropic calcium channel blocker such as verapamil. Athletes with nonthreatening ventricular arrhythmia can similarly be managed with beta blockade. Such athletes should undergo exercise stress testing and should be cautioned to report any change in symptoms. The general recommendation is that patients with MVP and prior neurological events should be placed on aspirin therapy.[7] Although the risk of a stroke is extremely low, we recommend that all patients with MVP use at least an 80 mg aspirin daily. The cost and risk of aspirin therapy is low, and the potential benefit is great.

Tricuspid Regurgitation (TR) and Stenosis (TS)

Trivial tricuspid regurgitation (TR) may be detected by Doppler echocardiography in up to 76% of athletes and is not associated with any valvular pathology.[12] The most frequent cause of important TR among young adults in most medical centers is valvular damage secondary to acute endocarditis associated with intravenous drug use.[7] Congenital valvular abnormalities is the most frequent cause of TR in children and is often produced by Ebstein's anomaly of the tricuspid valve. TR can also be caused by rheumatic heart disease and by right ventricular dilatation from volume or pressure overload. There is no evidence that isolated TR increases the risk of exercise and the effect of exercise training on the prognosis in TR has not been examined to our knowledge. Nevertheless, athletes with isolated TR and without markedly elevated right atrial pressures determined by neck vein examination can participate in all sports.

Tricuspid stenosis (TS) is generally produced by rheumatic fever and is almost always associated with MS. Recommendations for sports participation in athletes with TR and MS should be based on the severity of the MS.

Pulmonic Stenosis (PS) and Pulmonic Regurgitation (PR)

Valvular pulmonic stenosis (PS) and pulmonic regurgitation (PR) are almost always congenital in origin. Children and adolescents with PS are often asymptomatic even with severe obstruction.[7] Adults and some children may have symptoms of exertional dyspnea, syncope, and presyncope although exercise-related sudden death is rare. Doppler echocardiography is used to determine the severity of PS. A peak pulmonary valve gradient <40 mm Hg implies mild PS. Peak values of 40 to 70 and >70 mm Hg indicate moderate and severe PS respectively.[26]

Athletes with peak systolic gradient <50 and normal right ventricular function can participate in all sports. [26] They should be re-evaluated annually and undergo repeat echocardiographic studies every two to three years. Athletes with gradients >50 should be referred for valvuloplasty.

PR is usually due to congenital idiopathic dilation of the pulmonary artery.[7] Symptoms or exercise limitation are unusual from PR alone, although a rare patient may develop right ventricular enlargement and require pulmonic valve replacement. No exercise restrictions are placed on asymptomatic athletes with PR.

Other Considerations

Endocarditis Prophylaxis: Subacute bacterial endocarditis is most frequent in valvular lesions where high velocity blood flow enters a lower pressure chamber. High velocity flow into a lower pressure chamber disrupts laminar blood flow and creates areas of platelet, fibrin, and bacterial deposition. This physiologic profile applies to all of the valvular lesions discussed above with the exception of pure MS. Antibiotic endocarditis prophylaxis should be prescribed for all athletes with valvular heart disease. The only exception is in athletes with tricuspid or pulmonic regurgitation when a murmur is not detected. Right-sided pressures are lower than left-sided pressures which reduces the risk of bacterial deposition. Furthermore, tricuspid and pulmonary regurgitation detected only by Doppler is common. We provide athletes with the wallet sized instruction cards available in bulk at minimal cost from the Heart Association, 7272 Greenville Avenue, Dallas, TX 75231-4596.

The role of endocarditis prophylaxis in MVP has also been controversial. Antibiotic prophylaxis is generally recommended only if a murmur is present.[7] In patients with only a midsystolic click, the general recommendation is to use endocarditis prophylaxis only in the presence of signs of severe valvular pathology as discussed above.[7] Our approach is to place all patients with definite MVP on endocarditis prophylaxis before procedures associated with bacteremia. MR is often intermittent in patients with MVP and can be missed on a single examination. Also as many as 33% of patients with MVP, but without MR at rest, can induce MR with exercise.[27] The cost and risk of endocarditis prophylaxis in MVP patients is small and the potential benefit, if endocarditis is prevented, great.

Rheumatic Fever Prophylaxis: Guidelines for the prevention of rheumatic fever have been published.[28] Rheumatic fever prophylaxis is extremely important in patients who have had rheumatic carditis. Recurrent episodes of rheumatic carditis exacerbate the valvular injury, increase the severity of the valvular lesion and may hasten the need for valvular surgery. Patients with prior rheumatic fever who develop streptococcal pharyngitis are at high risk for recurrent rheumatic fever, and the infection need not be symptomatic to restart the carditis. Also, rheumatic fever can occur after a streptococcal infection even when the infection is treated promptly and correctly. Individuals exposed to groups, such as athletes on athletic teams and their coaches, are more likely to acquire a streptococcal infection. For all of these reasons, any athlete or coach with documented rheumatic valvular disease should receive antibiotic prophylaxis until at least age 40 and probably for life if the athlete continues to be exposed to groups of athletes.

The best prophylactic treatment is 1.2 million units of benzathine penicillin G intramuscularly every three weeks.[28] Oral treatment with 250 mg of penicillin V twice a day is acceptable, but much less dependable as prophylaxis because of reduced compliance. Patients allergic to penicillin can be treated with sulfadiazine 1 gm daily or erythromycin 250 mg twice daily. Erythromycin is usually a better choice in athletes because of the photosensitivity that can occur with sulfur containing compounds.

Summary

Knowledge of the evaluation and management of active individuals with valvular heart disease is a critical component of sports cardiology. Valvular aortic stenosis continues to account for approximately 4% of exercise-related sudden deaths among young athletes. The presence of a cardiac murmur or the possibility of cardiac symptoms among young athletes is a frequent reason for cardiac referral. The most common cause of cardiac murmurs in athletes is a flow murmur across the pulmonic valve related to the cardiovascular adaptations that occur with exercise training. In adults, physiologic flow murmurs are often related to aortic sclerosis, but this condition may not be as benign as flow murmurs in children because aortic sclerosis is accompanied by other risk factors for atherosclerosis such as hyperlipidemia.

Severe AS may present with exercise-induced syncope, angina, heart failure, and rarely sudden death. Athletes with severe AS should be restricted from competition and encouraged to undergo aortic valve replacement. Active subjects with moderate to severe AI require careful follow-up and periodic echocardiograms to detect early signs of heart failure or progressive LV dilatation. Surgical repair should be performed with the onset of symptoms, marked cardiac enlargement, or progressive LV dilatation. Athletes with moderate or severe MR should be followed in a fashion similar to that for AI and repair performed for symptoms or progressive LV dilatation. Active individuals with MS should undergo mitral valvuloplasty with the onset of symptoms. All athletes with valvular heart disease should receive antibiotic prophylaxis for endocarditis. Athletes whose valvular disease is secondary to rheumatic fever should receive streptococcal infection prophylaxis until age 40 or for as long as they are exposed to possible infection.

Personal Perspective

Athletes and active people referred for evaluation of valvular abnormalities generally fall into three groups. Those in whom the examination and additional studies reveal a physiological flow murmur; those with severe valvular disease or symptoms who require valve surgery; and those in whom the decision to proceed with repair or activity restriction is not clear. We find the most useful approach with such patients is to perform a careful history specifically eliciting information about competitive performance changes and subtle exercise intolerance. It is useful in this situation to have had some competitive athletic experience to understand symptoms that are a normal part of athletics. It is also extremely useful in valvular cases to retrieve old echocardiograms and to chart cardiac dimensions over time since this often reveals progressive chamber enlargement. It most instances this indicates that surgery will be inevitable and that the only issue is when. When there is still doubt with the patient or the physician as to how or when to proceed, one rarely makes a mistake by waiting briefly and following the patient closely. Even in severe AS the incidence of unheralded sudden death is rare although we do restrict athletic participation if severe AS is possible. Oftentimes a brief period of delay helps the patient, and even the physician, become more comfortable with the decision. On the other hand, if there is no doubt that a valve lesion is severe and will require surgery, we encourage the athlete to proceed with repair promptly to allow resumption of as active a lifestyle as possible.

Equally difficult is the decision as to whether the patient should have a valve repair or replacement and with which prosthesis or technique. This decision is based on the patient's wishes, the need for long-term anticoagulation, and most importantly, on the skill of the surgeon. The physician should never hesitate to refer patients to other institutions when more complex surgery or newer techniques, such as the Ross Procedure, are most appropriate and yet not performed frequently locally.

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Ironically, we can't even be sure the guidelines of our agreement with Aetna won't be changed right under our feet. Aetna can do that —without asking us—without asking you.

Why should you care? Because it can limit your treatment options. What's acceptable this month may not be the next.

We'd like to work with Aetna and other health insurers to work out our differences. After all, quality patient care should be a vital issue to everyone.

But just as vital is how to improve the health care system on all fronts so it works better for everyone.

We believe the answer lies in one simple question.

It's a question that can quickly bring focus to the debate. It can establish common ground. And be an invaluable guide in designing effective new proposals, be they local, corporate, or national.

Conclusion? Whenever health care is the issue, this should be the only real question: **Is it good medicine?**

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Helicopter Air Medical Transport: Ten-Year Outcomes for Trauma Patients in a New England Program

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ABSTRACT—*Background:* **Twenty-five years have passed since the introduction of the first civilian hospital-based air medical helicopter service. This study reviews the impact of a single air medical service during a decade of service on the survival of severely injured trauma patients.** *Methods:* **A retrospective database analysis was performed to determine program demographics and obtain outcome data. The outcomes of trauma patients were compared to mortality derived from a national database utilizing physiologic indices of severity.** *Results:* **Outcome analysis demonstrated an overall 13% reduction in mortality for air transported patients when compared to controls. Stratification based upon Trauma Score demonstrated a 35% reduction in mortality for victims transported directly from the scene with scene scores between four and 13, and essentially no difference in outcome for patients at Trauma Score extremes.** *Conclusions:* **Rapid utilization of helicopter air medical transport can have a dramatic impact upon patient outcome, especially within a select group of scene transported trauma patients with Trauma Scores ranging from four to 13.**

Introduction

A PRINCIPAL tenet of prehospital care is the rapid evacuation of the sick and injured to a site of definitive care. Military experience with prehospital trauma care demonstrated that as time to definitive care decreased from 18 hours in World War I to approximately 35 minutes in Vietnam, the corresponding mortality fell from 18% to 1.8%. This decrease was due to a number of factors that included the establishment of the mobile army surgical hospital (MASH) and an increasing understanding of trauma pathophysiology. The advent of rapid helicopter transportation beginning with the Korean conflict played a crucial role.[1,2]

The first continuously operating hospital-based medical helicopter service began operation in 1972 at St. Anthony's Hospital Flight for Life that serves Denver, Colorado. This program, although operating in different terrain than Connecticut, responds both to the scene and to interhospital requests for transport, and has a similar mission to the Connecticut air medical program. In 1985, LIFE STAR, Hartford Hospital's critical care helicopter service, became the 100th air medical program in the United States. By 1995, the Association of Air Medical Services (AAMS) reported that 194 hospital-based programs were operating in the United States, 21 of which were based in the Northeast.[3] In that year approximately 156,170 patients were transported a total distance of 7.7 million nautical miles, up nearly 46% per program from a decade earlier. The purpose of this study is to determine the impact of air medical transport.

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Methods and Materials

LIFE STAR, a New England Regional Program, began operations on 17 June 1985, servicing the State of Connecticut and surrounding regions within an operational radius of 150 miles. The stated mission of the service is to contribute to a reduction in mortality from trauma, acute medical and surgical emergencies, spinal cord injury, severe burns, and neonatal and pediatric emergencies.[4] The program was initiated with a Messerschmitt-Bolkow-Blohm (MBB) BK 117 twin engine helicopter; a second MBB BK 117 was incorporated in July 1990. The crew is comprised of a pilot, a flight nurse/EMT-P (Emergency Medical Technician-Paramedic), and a flight respiratory therapist/EMT-I (Emergency medical Technician-Intermediate). The helicopters are based at Hartford Hospital, an American College of Surgeons (ACS) verified and State of Connecticut designated Level I Trauma Center.

LIFE STAR patient data base analysis.—At the conclusion of each flight, all flight requests are recorded and information entered by flight nurses or communication specialists into Artificial Intelligence Corporation's Intellect 303T computer data base. The data collected includes patient demographics, mission profile, medical classification, physical assessment, Trauma Score, interventions performed, and patient outcome. For the purpose of this study, all flight requests between 17 June 1985 and 17 June 1995 were included for analysis. Flight records were disqualified from individual analyses based upon absence of pertinent information or presence of improper documentation. Statistical analysis was performed as indicated in the text, with an alpha level of 0.05 defined as significant.

Results

Program demographics.—From 17 June 1985 to 17 June 1995, LIFE STAR communications specialists received a total of 11,165 flight requests, 11,066 of which were for patient transportation; nonpatient requests included organ transfers and search and rescue (SAR) operations. LIFE STAR responded to 7,864 requests (70.4%), including 7,813 patient flights, 171 (2.2%) of which required the transfer of two patients. Of the 3,301 requests (29.6%) which went unfulfilled, weather was the principal factor (51.6%), followed by decision change by either the requesting unit or medical control (27.4%), unavailability of aircraft (13.9%), and mechanical difficulties (5.2%). Hartford Hospital received 56.7% of all flights. Scene responses accounted for 39.3% of requests. Sixty percent were interhospital transfers and the remaining 0.7% included organ transfers and search and rescue operations. Of the interhospital flights, 45.5% represented transfers between emergency departments while 14.5% were transfers between intensive care units. These data are similar to those reported by other northeastern flight programs although they differ from other AAMS regions (Table 1).

Table 1.—A comparison of LIFE STAR (LS) air medical transportation program with regional US air medical programs for the 1995 fiscal year.

	LS	NE (4)	1	2	3	5	6	7	8	National
Mission Parameters										
Avg. Patients	928	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	805
% Scene	39.3	36.7	40.9	13.8	28.9	47.6	30.5	31.5	54.6	35.6
% Interhospital	60.0	63.3	59.1	86.2	71.1	52.4	68.7	68.5	45.4	64.3
% Spons. Fac.	56.7	61.6	65.4	69.8	51.6	46.5	58.8	57.9	68.5	60.0
Total Distance	40.1	35.1	56.1	70.7	34.1	46.6	53.2	40.4	57.8	49.3
Nature of Illness										
% Trauma	59.8	58.2	50.8	38.1	43.2	47.9	35.7	56.1	59.9	48.8
% Adult Med/Surg	27.4	35.0	42.1	52.0	41.2	43.4	45.1	35.9	32.0	40.8
% Pediatric Med	9.1	6.8	7.0	9.9	15.6	8.8	19.1	8.0	8.1	10.4
# Hosp Programs		21	26	26	23	17	34	26	21	194

# HospPrograms=number of hospital-based programs within a specific AAMS region.
Sponsoring facility=percentage of patient flights returning to the principal sponsoring hospital.
Regions, as defined by AAMS, include the following states:

Region 1:	AK, WA, OR, ID, MT, UT, CO, WY
Region 2:	ND, SD, NE, IA, MN, WI
Region 3:	IL, IN, OH, MI
Region 4:	ME, NH, VT, MA, CT, RI, NY, NJ, PA, DE, MD
Region 5:	CA, NV, AZ, NM, HI
Region 6:	KS, OK, TX, MO, AR, LA
Region 7:	KY, TN, WV, VA, NC, SC
Region 8:	GA, AL, MS, FL

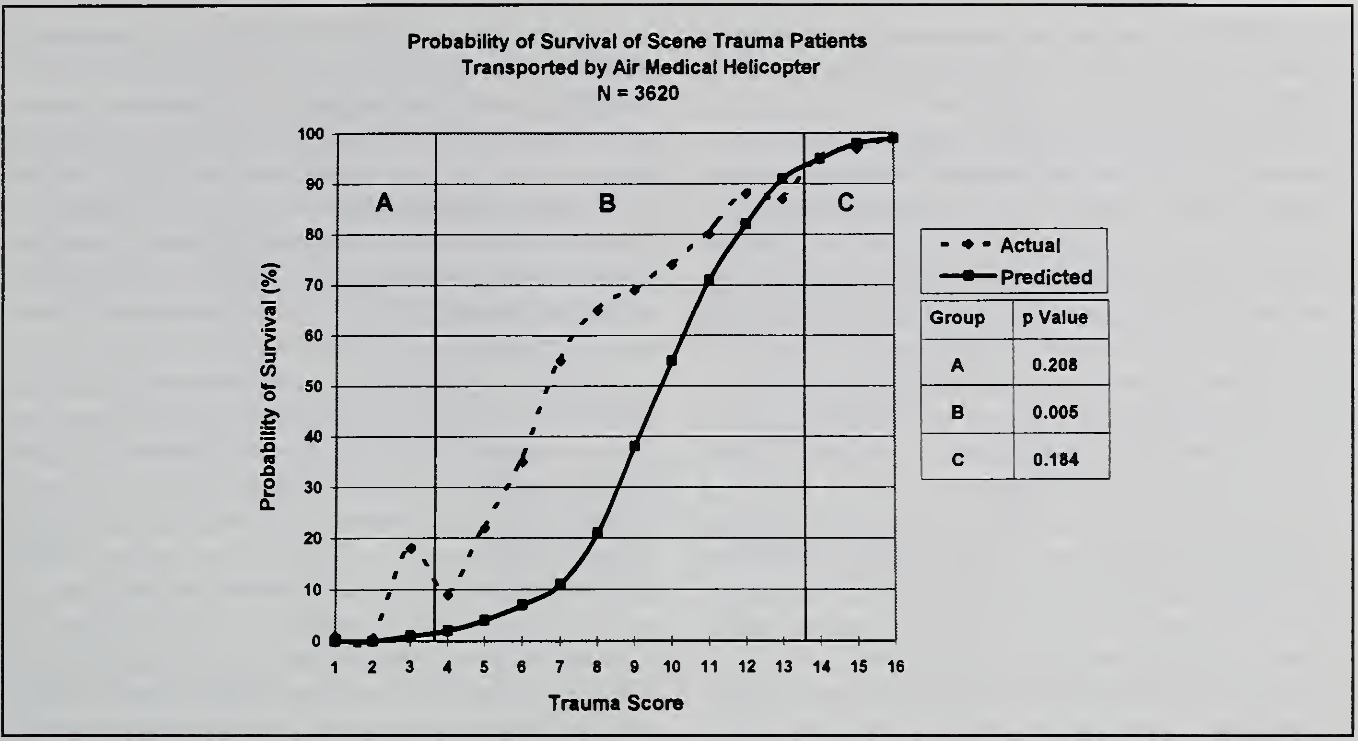

Figure 1.

The transport patterns were constant over the study period.

Trauma patients accounted for 59.8% of all requests for LIFE STAR. The mean age of multisystem trauma patients was 31 ± 18 years and 71.8% were male. Motor vehicle crashes accounted for 68.5% of all trauma patients; 7.5% involved pedestrians or bicyclists struck by a motor vehicle. Of the remaining patients, 10.4% were injured in falls, 4.9% were assaulted, 4.8% suffered severe burns, and 1.6% were near drowning victims, other categories accounted for 2.3%. Injuries occurring on roadways accounted for 71.4% while 19.1% occurred in residential areas. Of injuries occurring on roadways, the majority occurred on undivided state roadways (46.7%), followed by municipal roads (33.1%), divided state roadways (11.3%), and interstate highways (8.8%).

Forty-eight point seven percent (48.7%) of all requests occurred between Friday and Sunday with Saturday being the peak day (17.6%). Annually, peak utilization occurred from May through September with a relative nadir in January through March. Flight times to patients ranged from one to 55 minutes, with an average of 12.2 ± 6.1 minutes, and distances to patients ranged from one to 117 miles, with an average distance of 17.5 ± 10.3 miles. The previously stated ranges include rare intracity transports for critically ill pediatric patients when no ground transportation was readily available. Eighty-one point nine percent of all LIFE STAR requests originated in Connecticut. LIFE STAR transported patients from all six New England states, as well as New York, New Jersey, Pennsylvania, and Canada.

Table 2.—Initial trauma scores at the scene and upon arrival in the emergency department *vs* patient outcome.

Trauma Score	All Patients	Survivors	Non-Survivors
TS1	11.9 ± 4.5	13.2 ± 2.8	5.4 ±4.5
TS2	12.2 ± 4.7	13.7 ± 3.0	5.0 ± 4.4

TS1: Trauma score at the scene.
TS2: Trauma score in the emergency department.
Values reported as mean ± standard deviation.

Patient outcome.—During the first decade of operations (1985-1995), LIFE STAR transported a total of 7,984 patients. Outcome data is available for 5,500 patients (68.9%), including 3,840 trauma victims (75.6%). Seventy-seven point four percent (77.4%) of trauma victims survived. Of trauma patients transported directly from the scene, 74.8% survived to discharge, while 80.9% of interhospital transfers survived. The Trauma Score is a measure of physiologic derangement. It is a 16 point scoring system made up of the Glasgow Coma Score. The higher numbers represent a physiologically stable patient, whereas the lower numbers represent severe physiologic compromise. Mean Trauma Score upon arrival of the LIFE STAR crew to trauma patients at the scene was 11.9 ± 4.5, while that at the designated receiving hospital was 12.2 ± 4.7. Stratification of the results of scene trauma patients by outcome showed the mean Trauma Score at the scene and at the receiving hospital were 13.2 ± 2.8 and

13.7 ± 3.0 respectively for survivors, while scores for nonsurvivors were 5.4 ± 4.5 and 5.0 ± 4.4 respectively ($P=0.035$, Student's t test, Table 2).

In order to determine whether transportation by helicopter with an advanced life support crew affected trauma patient outcome, observed percent survival for a given Trauma Score was plotted against the national norm of predicted survival, a standard probability curve generated from patients in the Major Trauma Outcome Study.[5] The results indicate an overall 13% reduction in mortality for air transported patients who were picked up at the scene (Fig. 1, n=3620, Student's t test, $P=0.004$). Stratification of patients into three groups based upon their Trauma Score revealed that individuals with Trauma Scores of three or less showed no statistical difference in predicted *vs* actual survival (Student's t test, $P=0.208$). The same result was noted for Trauma Scores of 14 or greater (Student's t test, $P=0.184$). For those patients with a Trauma Score between four and 13, there was a 35% reduction in predicted mortality (Student's t test, $P=0.005$).

During the course of the study, 317 patients (4.0%) were found by the LIFE STAR crew to be in traumatic cardiopulmonary arrest upon arrival at the scene, and of these patients only three survived. These patients were reported to have signs of life at the scene by the ground ambulance crews but arrested at or before the arrival of the LIFE STAR crew. Two of the three patients were no longer in traumatic arrest on arrival to the receiving hospital.[6]

Discussion

It has been nearly a quarter of a century since the inception of the first dedicated, hospital-based helicopter emergency medical service (HEMS) in the United States. Air medical services have become an integral part of prehospital care in the United States, accounting for more than 150,000 patient transfers per annum. These services are faster than ground-based transportation, provide the highest level of prehospital medical care available, and allow rapid access to definitive tertiary care centers. Conversely, Baxt reported that air transported patients arrived at the trauma center less expeditiously than a group of ground transported patients.[7] He argued that the observed benefits were the results of the care of expert flight crews arriving to the patient in the field and beginning care earlier in the disease process. Thus, it was the rapid response to the scene with an expert crew who were able to perform life-saving interventions that was the most important element in the process. However, in spite of the documented cost effectiveness of HEMS, air transport has been criticized as being more expensive than ground transportation.[8]

The majority of motor vehicle crashes requiring helicopter intervention occurred on undivided state roadways and municipal roads (79.8%) while only 8.8% occurred on interstate highways. Rural areas demonstrate a relative lack of Advanced Life support (ALS) prehospital personnel and equipment, and a greater distance to designated trauma centers. Boyd[9] demonstrated that 70% of all fatal accidents occurred in rural environments, and that mortality rates in rural areas were four to five times greater than in urban settings. Rural areas are ideally suited for HEMS operations. Nationally, 66.5% of all flights occur in rural areas compared to 25.9% in urban areas.

A number of studies have demonstrated a positive impact of air medical transportation on patient outcome. Baxt and Moody demonstrated a 52% reduction in predicted mortality in a cohort of 150 individuals transported via HEMS *vs* 150 patients transported by ground.[7] A multi-institution study of 1,273 blunt trauma patients demonstrated a 21% reduction in mortality in the air medical group.[10] Boyd reported a 25.4% reduction in trauma-related mortality in patients transported by air from rural hospitals to level one trauma centers.[9] Similarly, Nicholl found that some severely injured patients are more likely to survive if transported from the scene by helicopter.[11] These studies suffered from small sample sizes or required the pooling of data from multiple air medical programs each with different operational guidelines. In a study at one pediatric trauma center, Moront demonstrated superior survivor rates for injured children transported by helicopter *vs* those transported by ambulance.[12] The current study analyzed the results of a single program's experience over a 10-year period. A weakness in reviewing a decade's experience is that there have been considerable technological improvements during this period. However, the flight crew has had a standardized education program with the same medical leadership and protocols. The flight practices for scene trauma patients have remained constant for the study period.

Despite rapid transportation and definitive care, nearly one quarter of 3,620 trauma patients did not survive to discharge indicating the severity of patients transported by air. Surviving and nonsurviving trauma patients formed two distinct populations in terms of injury severity, having significant difference in Trauma Scores both at the scene (13.2 *vs* 5.4) and upon arrival in the emergency department (13.7 *vs* 5.0). An analysis of expected *vs* observed survival demonstrated an overall 13% reduction in mortality for patients transported by LIFE STAR (Fig. 1, $P=1.004$).

Patients were further stratified into three groups on the basis of individual Trauma Scores. These groups were selected based on the flattened areas of the sigmoid MTOS probability of survival curve (Fig. 1). This reflects a patient's underlying physiologic disturbances as a consequence of injury. During the current study period, patients transported by LIFE STAR with Trauma Scores of three or less or 14 or greater had no statistically significant alterations in survival *vs* that predicted from MTOS data (P=0.208 and P=0.184, respectively). Individuals with the lowest Trauma Scores suffered such significant physiologic insults that regardless of intervention, the survival was poor. Likewise, those with the highest Trauma Scores, and therefore, minimal insults survived regardless of mode of transportation. The middle group, with Trauma Scores ranging from four to 13, represents individuals who have suffered a significant physiologic derangement yet may still be salvageable if they receive immediate, definitive care. In this group of patients, there was a 35% reduction in mortality *vs* predicted as compared to the overall 13% reduction (Fig. 1, P=0.005). The benefit of HEMS on this specific group of trauma patients is also demonstrated in a report by Cunningham comparing the outcome and the mode of transportation of trauma victims transported from the scene.[13] This data is similar to earlier work by Jacobs studying the impact of prehospital Advanced Life Support *vs* Basic Life Support (BLS) on trauma victim survival.[14]

At the extreme of physiologic derangement are patients in traumatic cardiopulmonary arrest. Wright et al, reported that of 67 patients in traumatic arrest upon HEMS arrival, only six patients were resuscitated, and none survived to discharge.[15] Falcone reported a 1.9% (six of 320) survival rate for patients in traumatic arrest, and noted that all six survivors presented to the emergency department in normal sinus rhythm.[16] Over the course of its first decade, 317 patients were found to be in arrest upon arrival of LIFE STAR personnel and of these only three survived until hospital discharge (0.9%).

Guidelines have been developed for identifying patients who are so severely injured that they have no chance of survival. This is an extremely challenging problem since the determination of death in the prehospital arena by nonphysicians is legally complex. It is difficult to assess a patient in the prehospital arena as it is frequently noisy with inadequate light. Additionally, the patient may be hypothermic and not fully exposed. In a recent study, the absence of signs of life and neurologic function at the scene were found to be negative predictors of survival.[6] Nonetheless, there is ongoing research designed to identify criteria that result in 100% prediction of mortality.

At the opposite end of the severity spectrum, a majority of individuals transported by LIFE STAR with Trauma Scores of 14 or greater were triaged on the basis of mechanism of injury, such as rollovers, falls greater than 15 feet, or death of another occupant within the vehicle, and comorbid states, such as age or underlying illness. The data show no difference in survival in this group of patients when compared to the control group. While these patients were physiologically stable they were the recipients of a significant transfer of kinetic energy and were at potential risk for life-threatening injuries. There still is a need for evaluation for occult injuries. This study did not utilize measures of morbidity in evaluating the patients so no comment can be made on benefits that accrue to these patients.

The air medical industry needs to re-examine itself and redefine appropriate triage criteria for the highest level of prehospital transport available today. Current triage criteria, based upon American College of surgeons Trauma Center guidelines, yield over triage rate of 35% to 40% in order to minimize morbidity and mortality from occult injury.[17] Trauma Center guidelines were not designed specifically for air medical transport. Clearly, the outcome data point to the necessity of prospectively identifying patients who would most benefit from HEMS transport, those with Trauma Scores in the range of four to 13. In the ideal setting, this is the group to target. Under triage was not measured in this study because of the lack of population-based ground transport data. It is likely that patients meeting the severity of Trauma Score four through 13 were in fact transported by ground rather than utilizing the more effective life-saving mode of air medical transportation. Capture of these patients is essential to delivering high quality trauma care. There are many recent reports of the utilization of air medical transport for nontrauma victims, but objective data on the benefits of air medical transport for these patient populations is sparse.[18–20]

Objective data on benefits of air medical transport for nontrauma patients is sparse. Mechanisms to compare outcomes for cardiac, neonatal, pediatric, and high-risk obstetric populations need to be developed for the air medical environment. Air medical transportation has been shown to benefit a select group of trauma patients.[7,9,10] A major weakness of the current study stems from the nature of the experimental design. It is ethically and logistically implausible to randomize potentially critically ill and injured patients in order to conform to controlled, prospective experimental designs. As a result one is left with the less stringent retrospective experimental designs employed in the current work. Although this work employed retrospective data base analysis to generate outcome data, all data were collected in a prospective manner. This, in conjunction with the large sample size and study period, should minimize any unforeseen biases.

A second potential weakness of the paper derives from the control group used in outcome analyses. As noted, the 150 mile operational area of the LIFE STAR Program results in flights throughout Connecticut and portions of New York, Massachusetts, and Rhode Island. The ideal control group would be a cohort of concurrent patients transported by ground EMS units throughout the operational area, stratified on the basis of age, mechanism of injury, and other confounding variables. The Major Trauma Outcome Study (MTOS) database provides a reliable alternative source of outcome data, for a comparable group of patients.[21] MTOS data was generated a decade ago, and trauma care has advanced since then. Furthermore, the MTOS data reflect the national experiences of 139 trauma centers, and may not be applicable to a single geographic area, such as New England. However, at present there is no better trauma outcome control group available.[22,23]

This study, like those which have preceded it, has measured outcome in terms of patient survival. Although mortality provides a simple, well-defined endpoint and therefore is subject to less interobserver variation and bias, it is an extremely coarse measure. In reality, patient outcomes cover a spectrum reflecting morbidity as well as mortality.[24] There was no benefit in terms of survival for patients with a Trauma Score of 14 or greater transported by air. This paper did not address the issue of cost. Air medical programs are expensive. The average charge for an air medical flight in Connecticut is $5,000.00. The rate is set by the State of Connecticut. The policy of the program is to respond to all requests based on medical state approved criteria with no fiscal screening.

Finally, it must be noted that LIFE STAR is representative of New England air medical programs. As a result, the conclusions drawn in the current study may not be directly applicable to programs operating in other geographic regions of the United States. Despite these flaws, the data strongly support the utilization of air medical transportation, under specific circumstances, for the care of the sick and injured.

Conclusion

After nearly 25 years of continuous operation, air medical transportation has become an integral part of prehospital emergency medical services. Over the years, a number of studies have demonstrated its benefit in reducing mortality of trauma victims. The current study reports the experience of a New England regional HEMS service over its first decade. The data suggest that while air medical transportation has a definite benefit, reducing mortality by as much as 35%, this benefit applies to a select group of patients. The industry needs to re-examine its triage criteria and produce outcome data which can be used as guidelines for modifying current practices or implementing new protocols. Advanced air medical services have secured a place in the transportation of seriously physiologically compromised and injured patients.

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Commentaries

The Internet as an Equalizing, Energizing, and Transforming Force in Patient and Physician Relationships

> "Right now the Internet is a huge gusher of an oil well. We're just beginning to build the refineries."
>
> Richard Rockefeller, MD
> *President, Health Commons Institute*
> *Falmouth, Maine*
> *New York Times, 13 July 1998*

> "What if there was a box—a box that contained all the answers to all the questions you've ever had. A box that contained every invention and every idea you've ever wondered about. A box that could help doctors figure out how to cure disease.... There is such a box. It's called a server. It connects people. It intertwines businesses. It transforms industries."
>
> *Introduction to eight page IBM advertisement, running in major national newspapers, July 1999*

Introduction

A "gee whiz" futurist, I am not. Nor am I a starry-eyed idealist about the Internet as a universal solution to health care's woes. Indeed, I regard the Net as fraught with inaccuracies, filled with contradictions, and spilling over with Snake Oil.[1–3] Finally, I am not a technological wizard — a so-called medical informatics expert with informatics being defined as the whole of technology and its application. I am simply a physician turned journalist and editor who understands what's at stake for physicians and their patients.

My research over the last 20 months persuades me that the Internet is profoundly and irreversibly revolutionizing patient-physician relationships as we know them. Physicians' best hopes for a prosperous and gratifying future lie in creating Internet-based partnerships with their patients.

This future will be made possible by physicians' increasing use of personal computers connected to the Internet. The number of physicians using personal computers jumped from 50% to 85% from April to July 1999,[4] and among graduating medical students, 97% now use computers.[5] Thirty-three percent of physicians have used e-mail in their practices to communicate with patients.[4]

A closer patient-physician relationship will occur because of the practicality of outsourcing of practice management, claims processing, data collection, financial management, e-mail communication, patient education, outcome measurements, and e-commerce functions. The power of the Internet to facilitate physicians outsourcing of business functions so physicians can concentrate more on the patient is not my opinion alone

- Stephen Halper of Donaldson, Lufkin, Jenrette predicts, "Connectivity" is going to be the fastest growing segment of the e-health sector."[6] 2) Scott McNealy, CEO of Sun Microsystems, Inc, says, "Saving money is not the only reason or even the main reason for outsourcing. The best thing about outsourcing is that it frees you to concentrate on your business."[7]; and Russell Coile, Jr., a widely respected futurist, forecasts that technology will reshape the health-care landscape and offers this poll of 150 physician executives as evidence of things to come.[8] (Table 1)

My Research—Formal and Informal

I conduct my formal research as follows:

- Each day I scan the Internet for news under the American Online 'physician' search file;
- download and print pertinent articles;
- collect three national newspapers—*The Wall Street Journal, The New York Times, USA Today*—and three regional newspapers—*The Boston Globe, The Hartford Courant*, and another metropolitan newspaper;
- read and cut out all articles relating directly or indirectly to health care;
- paste the Internet and newspaper clippings in logbooks, of which I now have 16;
- use a Pentium II 400 Megaherz IBM computer to index the content of newspapers and the Net;
- count the number of entries in each category, reread them, and analyze them for contents and trends.

My informal research consists of my work at Physician Practice Options. I identify stories, write editorials, compose commentaries, and, most importantly, talk to practicing physicians across the United States over our direct toll-free line. During these calls, which now number nearly 2,000, I seek to find out what's going on "out there" in the real world.

I have chosen this type of research because I believe:

- Newspaper and Net news releases, published under daily deadline pressures, more accurately reflect American consumers' attitudes than the medical or management literature.
- Americans are ahead of the medical establishment in setting health-care trends.

Table 1.—The Future of Technology

Technology Prediction	True	False	Not Sure
Personal computers will be as prevalent for physicians as computers	94%	6%	0%
Clinicians and information professionals will be intimately linked	62%	30%	8%
All patients will carry their medical history around with them on Smart Cards	47%	42%	11%
Telemedicine will reach a point when physicians and patients will not have to be in the same room	58%	33%	9%
Artificial or synthetic body replacement parts will be as common as contact lens	35%	52%	13%

Source: "The Future of Health Care Delivery': Quick Tally electronic poll. American College of Physician Exeuctives, 1999 Spring Instate, Los Vegas, Nevada, May 13, 1999.

- A revolution is underway among American health-care consumers, and the dimensions of this revolution are evident in the daily news.
- The daily news is also an important vehicle for bad news about health care; all revolutions have occasional messy endings, and Internet-powered health-care change is no exception.[9]
- Heath-care consumers—not HMOs, not hospitals, not physicians, and not government—will dictate the direction and speed of health-care change.[10]
- Health-care consumers are turning to the Internet to fill in the gap between patients and physicians; in 1998 an estimated 22 million Americans went online for medical information, mostly about specific diseases and drugs—a number expected to increase to 33 million in 2,000.[11]
- More health-care consumers will spend even more time on the Net: from 1998 to 1999 the number of subscribers to America Online, which has 39% of the online market, increased from 15 to 17 million and the time spent went from 45 minutes to 55 minutes a day.[12]
- The Internet and associated converging information technologies are driving the U.S economy and dramatically transforming health care.[13,14]; Bill Gates, founder and CEO of Microsoft, isn't the wealthiest man in America by chance. [15]

File Entries on Information Technologies

Of 3,630 items in my newspaper and Internet news files, dated February 1998 to September 1999, 341 (9.0%) concerned use of computers in health care, gathering of

Table 2.—Number of Newspaper and Internet Entries in My File on All Health-Care Information Subjects.

Subject Matter	Number of Entries
1) HMOs, managed care, patient rights, problems with access and denial, HMO backlash	432
2) Drugs: research, promise for new diseases, costs, new drugs, hazards, and market news	377
3) Information: systems, online applications, computers, webSites, use by patients and physicians	341
4) Physicians: actions, problems, profiles, organizations, unions, and miscellaneous	292
5) Health system concerns and health-care politics	216
6) Alternative medicine: herbs, diets, vitamins, weight loss, cosmetic surgery, alternative practitioners, self-care, other	215
7) Diseases: AIDS, diabetes, heart disease, and other chronic disease	194
8) Cancer: breast, prostate, colon, lung and others	191
9) New technologies	144
10) Medicare	140
11) Hospitals and academic medical centers	130
12) Costs, health-care inflation, HMO premium rises, high costs of drugs, especially for Medicare recipients	126
13) Safety issues: contaminated food, drink, blood supplies, environment, hospital	104
14) Tobacco, guns, and other major health hazards	83
15) Medicare fraud, price fixing of vitamins, and other	68

health-care information, converging video, speech recognition, Internet, e-mail, and online technologies and formation and merger of companies to provide those services. In the last month I researched, August 1999, 88 of 535 entries (16.3%) were devoted to these subjects.

File Entries on All Subjects

Now let's put the information technology entries into a broader context. Other subjects that appeared with frequency in my newspaper and Internet file included the following (Table 3).

What These Numbers Portend

Viewed as a whole, these newspaper and Internet news accounts indicate widespread concern about:

- where managed care is taking us;
- the pharmaceutical industry as a powerful engine driving the system;
- a "high tech-high touch" struggle between scientific and alternative medicine with a mounting willingness of Americans to move outside traditional medicine boundaries;
- a continuing American belief that research and technology can conquer most common diseases;
- a gathering recognition that the Internet is a fundamental interconnecting force pushing forward and aside everything in its path.

Examples of Interconnectivity

For example:

- HMOs and health plans are using the Internet to communicate with and influence doctors;[8,9]
- drug companies are employing Internet information to influence doctors to prescribe their drugs;[18]
- Internet companies are recruiting patients for clinical drug trials;[11,12]
- online pharmacy prescribing is kicking up its heels as the "Wild West of the Web;"[13]
- the Federal Trade Commission has identified 400 Websites promising phony cures for AIDS, cancer, multiple sclerosis, and other diseases;[7,20]
- well-known physicians such as C. Everett Koop and George Lundberg have jumped on the Internet bandwagon; [21,23]
- Wall Street is pouring billions of dollars into such companies as Healtheon, WebMD, and drkoop.com.;[10]
- Just to give you an idea of the investor money pouring into health-related Internet , here are the Initial Public Offerings (IPOs) for June 1999: (see Table 3)

Table 3.—Initial Public Offerrings of Internet-Based Health-Care Information Companies in June 1999.

Company-Ticker	Offering Type	Offering size	Company Description
AmericasDoctor.Inc—AMDR	IPO - filed 6/14	$60.0 million	Consumer health-care site
CareInsite.Inc—CARI	IPO—filed 6/16	$102.6 million	Web-based health-care connectivity
Drkoop.com, Inc—Koop	IPO—filed 6/8	$84.6 million	Consumer health-care Web site
Netivation.com—NTVN	IPO—filed 6/23	$25.0 million	Health-care information and e-commerce site
Onhealth Network Co.—ONHN	Secondary offering —filed 6/22	$52.5 million	Consumer health-care Web site

Source: Townsend—Frew Investment Banking, Durham, North Carolina

A Chain Reaction of Cascading Paradigm Shifts

What's going on here? Well, in my opinion, it's a self-sustaining chain reaction of inter-related paradigm shifts signaling the massive transition to an information-dominated economy. This historic transition, a global phenomenon, began in earnest 10 years ago with the collapse of communism.[25] Tom Petzinger, Jr., in a Wall Street Journal article,[926] an excerpt from his book The New Pioneers: The Men and Women Transforming The American Workplace and Marketplace (Simon & Schuster, New York, 1999), laid out this transition as a series of paradigm shifts (the third column is mine and describes the impact on patients and physicians). The rallying cry of successful physicians after the millennium may be "Brother, can you paradigm?"

Table 4.—Paradigms Lost … and Gained: Two Worldviews and What These Paradigm Shifts Mean Clinically.

Mechancial model (old paradigm)	**Natural model (new paradigm)**	**Clinical meaning (current shift)**
Machine, clocks	Organisms, ecologies	The shift is towards viewing patients as dynamic partners who act, react, and give you continuous rapid feedback, often by e-mail, or staying loyal or leaving you.
Optimum design, consistency of operation	Adaptation, continuous improvement	Act, get feedback, adapt—fast.… Measure customer response. Measure outcomes. Get better. Or you will not be one of the surviving species of specialists.
Command and control	Autonomy for employees, articulation of vision	It's no longer "doctor knows best," inside or outside the office; it's train your staff as a team, know your niche and your customer, treat patients right, and give them value.
Land, energy, materials	Information and knowledge	It'll be about what information you offer about prevention, self-treatment, and diagnosis, not how charismatic you are, or how beautiful your office is.
Economies of scale	Unity of purpose	It's about creating a unified and personal compact with patients for staying well, and getting better, not about how large a group you belong to.
Hierarchies	Networking	The new world is going to be about people talking to each other from the "bottom-up," not giving directions from the "top-down."
Division of labor	Synthesis of minds	It's about "cross-training," about training gifted collaborative generalists, not about pigeonholing people into narrow specialties.
Producers	Consumers	The source of economic authority is going to be the health consumers, not the corporate payers, the government, the HMO, the hospital, or the doctor
Capital	Creativity	The principal economic constraint will not be lack of money, but lack of imagination. The Net fosters entrepreneurs, removes barriers between patients and doctors, and levels the playing field.

Source: Tom Petzinger, Jr., *A New Model for the Nature of Business: It's Alive! Forget the Mechanical—Today's Leaders Embrace The Biological* Wall Street Journal, February 27, 1999.

A Vision of the Brave New World

In their quarterly newsletter, *Forecast*, The Health Care Group, a large consulting group in Plymouth Meeting, Pennsylvania, recently gave this compelling and concrete vision of what the brave new world of the Internet will be like for patients and their doctors:[27]

"The idea of the Internet is to make accessible—to anyone with a PC and a browser—massive amounts of information, at low-cost, quickly." Soon, your patients will expect your practice to maintain a WebSite that is 'good enough' for them to 'bookmark' for easy and frequent use. They will routinely search the Internet for qualitative and convenient information about your ability to treat their diseases or conditions. They will become 'experts' in the diagnosis and treatment options available to them. They will make provider decisions based on Internet information and, perhaps most importantly, expect the point of doctor-patient contact to migrate from the medical practice office to the patient's PC location.

Patients will expect your practice WebSite to inform and educate them, and provide interactive services, such as online appointment scheduling and questionnaire (eg,

Table 5.—Number of Entries Relating to Online Health-Care Information Over the Last 20 Months. (Note the exponential growth, which tailed off slightly when Internet stock lost half their value starting in June.)

Different time periods, spanning the 20 months from 1 February 1998 to 1 September 1999	Number of newspaper articles or Internet news items relating to online medical or health information
February 1998 to December 1998	12, roughly one article each month
January 1999	2
February 1999	3
March 1999	6
April 1999	17
May 1999	35
June 1999	78
July 1999	82
August 1999	88

patient history, satisfaction surveys) completion from their home PCs.

They will monitor their health status and view their treatment progress electronically. They will attempt to diagnose themselves and determine which providers to see. They will need you to help them distinguish science from fad. They will need you to guide them as they attempt to triage themselves.

Telephone and television expanded the volume of information and increased information available. The PC and Internet will merge interactivity and telecommunications with remarkable information management capacity, resulting in 'virtual' house calls, with the doctor on one end of the computer connection, the patient on the other."

Pace of Change into the New World

The pace of change, i.e. the number of articles and Internet news releases over the 18-month period from January 1998 to July 1999, accelerated sharply after April 1999. Here is the number of entries by time periods.

Internet Roles of Patients and Physicians

As I reviewed 1998, it was clear the low number of entries was deceptive. A closer reading showed that the fuses were being lit for an explosion of Internet use in 1999 by consumers, physicians, and entrepreneurs.

Here are the key 1998 entries:

- Katie Hafner, "Can the Internet Cure the Common Cold? No, but the Vast Amount of On-Line Medical Data is Changing the Relationship between Doctor and Patient," *New York Times*, 10 July 1999.

  The article said that more than 10,000 health-care sites with information from experts, amateurs, and quacks existed. The concluding paragraph read: "Despite the problems, reliable medical information is becoming easier to find on the Net, as the bad is filtered from the good. Much commercial medical information on Web sites now helps guide people to accurate health care information." In a sidebar article, Denise Grady identified these popular sites:

  www.healthfinder.gov,
  www.medscape.com
  www.nejm.com
  www.ama.assn.com
  www.healthy.net/selfcare
  www.dejanews.com
  www.drweil.com
  www.quackwatch.com, and
  www.childrenwithdiabetes.com

- Milt Freudenheim, "Medicine at the Click of a Mouse: On-Line Health Files are Convenient. Are They Private?" *New York Times*, 12 August 1999.

  This piece warned that personal health information is no longer confidential in the age of the Internet. It said that 80% of hospitals use the Internet and 16% use it to give personal information directly to patients, and that Kaiser Permanente, Oxford Health Plans, Aetna, Inc, United Healthcare, Harvard Pilgrim, and Health Partners all have ambitious Net Plans. On the physician side, it said, "Beyond just billing, E-mail is taking a role in actual doctoring."

- George Anders, "Healtheon Struggles In Efforts To Remedy Doctors' Paper Plague," *Wall Street Journal*, 2 October 1999.

  This front page *Wall Street Journal* article described how Healtheon Corp, one of Silicon Valley's most talked-about Internet companies, was trying to create a paper-free electronic medical record for a California medical group. At the time of the report, three months into the project, Healtheon's software wizards had met their match in physicians, who at that point were not impressed. Perhaps they should have been. Four months later, on 12 February 1999, the stock of Healtheon, a three and one-half year old company, quadrupled from $8 to $31 on its first day of trading. The investor excitement was based on Healtheon's development of ways for doctors, hospitals, labs, and other medical providers to use the Internet to swap patient data.[29] On 21 May 1999, Healtheon, with Microsoft brokering a $9.84 billion deal, consummated a merger with WebMD.[30,31] What WebMD brought to the table were Internet links between physicians and health-care consumers.

- By 15 December 1998, WebMD, at that point still unaffiliated with Healtheon, was running full-page advertisements in major publications, promoting "The Last Great Medical Discovery of the 20th Century," which, it said, was the use of the Internet to forge "the strongest partnerships in the profession, connecting doctors, hospitals, and patients." The advertisement went on to say, "It uses the World Wide Web to untangle the web of managed care, and gives physicians tools to help make their practices more efficient, more cost-effective. See how well you'll be cared for in the 21st century. Pay an office visit to the future of health care. www.webmd.com."
- On 24 December 1998, an article appeared in the Wall Street Journal indicating that doctors were beginning to rouse from their lethargy about the Internet.[25] Its title was "Just What the Doctor Ordered: Physicians Recommend Sites, Amid the Clutter, Plenty of Data on Any Ailment." The article listed five specialists who were recommending their favorite web site. The idea had dawned that physicians had a responsibility to act as editorial filters for patients to identify the good web sites and weed out the bad.

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50 Years Ago

From *The Connecticut State Medical Journal*

November 1949

Child Health Services in Connecticut

STANLEY B. WELD, M.D., *Hartford*

FOLLOWING discussions at meetings of the American Academy of Pediatrics and the American Pediatric Society in 1944, a survey of child health services in the United States was undertaken by the Academy in conjunction with the United States Public Health Service and the United States Children's Bureau. Financial assistance was supplied by the National Foundation for Infantile Paralysis, the Connecticut Tuberculosis Association, the Connecticut Cancer Society, the Connecticut Society for Crippled Children, and the Charles P. Hood Foundation, Boston. Each state established an organization known as the Study Committee under the direction of the State chairman of the American Academy of Pediatrics for the purpose of gathering information, and a special phase of the study was devoted to the study of the programs and facilities used for training in pediatrics in medical schools and teaching hospitals. The findings were published by the Commonwealth Fund in April 1949, and have already led to action to improve the health of the nation's children. This study is unprecedented in that it is the first attempt on the part of any one segment of the medical profession to analyze accurately the nation's needs for its services as well as the adequacy of the services now being rendered.

There was an estimated total of 36 million children under 15 years of age in the United States in 1945. Of this number 1.1 per cent resided in Connecticut. Connecticut has a low proportion of children to total population, ranking 43rd among the states in this respect. Connecticut is the wealthiest state in the Union measured by annual per capita income and therefore should be in an enviable position to support a good medical care program. For the five years from 1941–1945 this State together with Oregon boasted the lowest infant mortality rate in the country, 30.0 deaths under one year per 1,000 live births. In July 1946 Connecticut physicians numbered 1 to 227 children under 15 years of age, placing the State sixth from the top in this respect. With the exception of Delaware, Connecticut physicians in general practice were reported to have more training in pediatrics than those in any other State. Only one other State, New York, was found to have more pediatricians in private practice per child population. Although it ranked sixth in numbers of children per physician it ranked twelfth in children under medical care. Only two states, New York and Massachusetts, had a higher proportion receiving hospital care than Connecticut, and in the number of children under clinic care only nine states stood higher than Connecticut. There were found to be twelve times as many general practitioners as pediatricians with the responsibility for the care of 65.8 per cent of the total children resting with the former group.

This State had one dentist for every 341 children under 15 years, ranking third behind New York and Illinois, but the provision of dentist's work in children fell off considerably below this number. With 2.05 hospital beds per 1,000 children under 15 years, Connecticut ranked fifth. 98.9 per cent of all live births were delivered in hospitals, the highest proportion in the country. In the well child conference field this State ranked eighth in visits and seventh in child attendance. The State boasted one full time public health nurse to 989 children, the highest concentration of public health nurses of all the states, but the proportion of nurses who have had public health training is smaller than for the country as a whole.

For the purposes of this study towns were grouped arbitrarily based on (1) the location of hospitals accepting maternity patients and the movement of prospective mothers to these hospitals; (2) natural trade areas in 1945 and centers of such trade areas outlined in cooperation with the Connecticut Development Commission; (3) the delinea-

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Reprinted from the *Connecticut State Medical Journal*, November 1949.

tion of metropolitan areas by the U. S. Bureau of the Census; (4) regional high school districts; and (5) the distribution of services of social work agencies. This resulted in the formation of 22 areas. A few striking facts stood out in comparing the various areas. Infant mortality rates in general were lowest around the three largest cities. Only 85 or one half the towns in the State require smallpox vaccination. Fourteen towns with approximately one half the population of the State have full time health departments, all except one under the direction of physicians.

It was found that of the 649 physicians in general practice who reported on hospital training, seven per cent have had no hospital training or less than one year; 55 per cent had received two or more years of hospital training. 61 per cent of physicians in general practice had received one month or more pediatric training in a hospital. Pediatricians were found concentrated in the most densely populated areas. General practitioners cared for three times the number of children as did pediatricians. The proportion of visits to well children was much higher for pediatricians than for general practitioners. The number of whooping cough cases has not materially changed in eight years, indicating that immunization in infancy against whooping cough has, to date, not been practiced by physicians on a widespread scale.

As in the case of physicians, so with the dentists, the populous towns had the greatest numbers. The higher ratio of fillings (1:3) in children under six years compared to the ratio for children six to fourteen years (1:5) brought forth the query as to whether or not there are dentists still not interested in trying to save deciduous teeth.

It was found that in 1946 Connecticut had but 75 per cent of the number of hospital beds assigned to children estimated necessary by the U. S. Public Health Service. Instead of 6,907 beds there should be about 9,000. The construction of new hospital beds has not kept pace with the increase in population nor with the increase in hospital mindedness of the people. Only seven hospitals had a pediatric house staff in addition to the pediatric beds. No child in Connecticut is more than 25 miles from a hospital approved by the American College of Surgeons. Facilities for care of the newborn were found adequate, but only 18 out of 31 hospitals reported admitting acute poliomyelitis cases for diagnosis and only five kept them for care.

Well child conference centers were found well distributed throughout the State. Practically all of the conferences held outside cities were under the auspices of the Bureau of Maternal and Child Hygiene of the State Department of Health. There was found to be only one pediatric clinic east of the Connecticut River and as a whole they are few in number and poorly distributed. Mental hygiene clinics are concentrated in the areas between Greenwich, New Haven, and Hartford. In 1945 this service met only about 40 per cent of the need.

Some of the medical service to Connecticut schools exists on paper only. The survey has revealed the fact that there is much room for improvement in this phase of child health work. In at least 23 towns there was no continuous medical supervision of school children. Thirty-seven towns probably do not comply with the State law requiring examination of a school child at least once in three years. Nurses trained in public health work, though showing the highest concentration of any State, are lacking in greatest numbers in rural areas without qualified nursing supervision, just where they are most needed.

Recommendations

A committee should be appointed by the Connecticut Branch of the American Academy of Pediatrics to study the needs in child care which have been found by this study, and to work with other organizations in the State toward the correction of these needs. This committee is now in the process of being selected.*

Organized efforts should be increased by all known means of public information to bring about the development of full time health districts in Connecticut.

Health education measures to promote immunization against communicable diseases should be increased, placing special emphasis on whooping cough.

The Connecticut State Department of Health should give its attention to the need for more health education in the State in order to develop better understanding in regard to the need and utilization of medical facilities, especially in rural areas.

Program committees for State meetings should include pediatric representatives. A program of papers on pediatric subjects should be submitted to the State Medical Journal. Pediatric case demonstrations should be included in county medical association meetings. There should be an expansion of the present teaching program under which members of the faculty of the Yale University School of Medicine give courses in local hospitals on subjects requested by local physicians so that it is set up under county or other local auspices.

The dental health program should give priority to the group from kindergarten through the third grade. Dental health certificates should be required prior to entrance to school and at periodic intervals thereafter. Increased cooperation should be encouraged among dentists, teachers, parents and children, and dental examinations should be made part of health services. Instruction in dental health should be constantly emphasized in health education programs, refresher courses for dentists should include instruction in children's dentistry, and the Connecticut General Assembly should be importuned to provide increased funds necessary for the protection and preservation of children's teeth.

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*This child health implementation committee is being sponsored by the State Chapter, American Academy of Pediatrics. It is to be comprised of representatives from medical, dental, nurses, public health, hospital, educational, and interested lay organizations. The chairman is Dr. John B. Griggs of Hartford.

Steps should be taken to increase the number of beds in general hospitals so that there will be at least 4-1/2 per 1,000 of the population, of which 15 to 20 per cent will be for children in pediatric units. More emphasis should be placed on the quality of pediatric, medical, and nursing service available in hospitals. Each hospital should aim to have in charge of the pediatric unit a pediatrician and a nurse with pediatric training. Consultation services of experienced pediatricians should be made available in rural hospitals, there should be more pediatric beds, and children should be placed in a pediatric unit rather than with adult patients. There should be more nurses with special training caring for newborn infants and each nurse should be required to care for only eight infants at one time. More bassinets for individual care should be provided. Controlled methods for formula preparation and terminal sterilization should be more widely used. Infants in the newborn nursery should be under pediatric supervision, preferably the one in charge of the pediatric service of the hospital. Hospital nurses should be trained to care for premature infants and whenever possible nurses assigned to care for premature infants should not be assigned to any other service, including the care of full term infants. The facilities in each hospital should be reviewed, since upon the presence of suitable arrangements and equipment may depend final outcome of care of the premature infant in terms of life or death. The State Department of Health should make a continuing statistical study and analysis of deaths due to prematurity in Connecticut. More hospitals should accept and provide trained personnel and facilities for the care of convalescent poliomyelitis patients.

Each of the 22 areas should review its own needs for health supervision and services rendered in comparison with those in area No. 13 (New Haven, Hamden, North Haven, Woodbridge, and East Haven) which is believed to come nearest to achieving the desired goal of at least one medical visit annually for each child. The well child conference training center program for physicians and nurses should be continued and expanded.

More pediatric clinics should be established, especially in the eastern and northwestern sections of the State. Further studies should be made to define present needs for additional mental hygiene services, and steps should be taken to fill the gaps in these essential services without lowering standards of training for personnel.

To reduce the incidence of crippling conditions among children appropriate: preventive measures should be stressed. Additional well child conferences, more pediatric clinics and better health examinations in schools are needed. More medical supervision is needed, particularly for children with heart conditions and for children with convulsive disorders. All kinds of services to physically handicapped children should be increased through voluntary, local, and State agencies, and through expansion of the program of the Division of Crippled Children of the State Department of Health,

In the school health programs the effectiveness should be increased for all children by the State Departments of Education and Health jointly developing plans. The functions of physicians, dentists, nurses, and teachers in the schools should be clearly delineated and methods for cooperative efforts by these individuals be developed. Methods for improving the quality of school medical examinations should be determined and health appraisal programs should be coordinated more closely with community medical and dental care facilities. Health education in elementary schools should be extended, improved, and vitalized and particular attention should be given to the development of a broad comprehensive health education program for secondary schools. Increased attention should be given to the development of adequate school health programs in rural areas. There should be twice as many public health nurses in Connecticut as there were in 1946 (1:1,000 children) in order to carry on a successful and adequate health program. Well prepared public health nurses should be employed in sufficient numbers so that a high quality of nursing service will be available for well child conferences, schools, home visits for health supervision, bedside nursing, and other public nursing services, such as those for maternal hygiene, communicable disease control, and industrial health. It is recommended that, in view of the shortage of well prepared public health nurses, public funds be provided for training greater numbers of nurses in public health.

The recommendations in this report are worthy of serious consideration. Connecticut is extremely fortunate in many ways, not least among which is its wealth. That there are many means suggested by which it may improve its child health services should be a challenge to layman and physician alike. The child of today is the parent of tomorrow. We are the citizens of Connecticut. The obligation to improve the health of our population rests with every one of us.

Consumer Concern or Complaint Form Regarding Group or Individual Health Insurance Including Managed Care Plans

To Be Submitted To
THE CONNECTICUT DEPARTMENT OF INSURANCE
CONSUMER AFFAIRS DIVISION
P.O. BOX 816
HARTFORD, CT 06142-0816

Phone: (860) 297-3900 or 1-800-203-3447 Fax: (860) 297-3872

The Consumer Affairs Division of the Department of Insurance receives, reviews, and responds to complaints and inquiries from state residents concerning insurance related problems. The staff examines each complaint to determine whether statutory requirements and contractual obligations within the commissioner's jurisdiction have been fulfilled. The Consumer Affairs Division coordinates the resources available within the Department to address consumer complaints.

In order for the Division to pursue a formal review of a concern or complaint, the consumer must submit a written explanation to the address listed above with as much pertinent detail as possible. Each written submission to the Consumer Affairs Division will be acknowledged.

Name of person filing the concern or complaint:

____

Address: ____

Phone where the Department can contact you: (_____) ______________________

This concern or complaint concerns the following Insurance Company or Managed Care Plan: ____

Policy Number: ____

Name of Policyholder: ____

Name of Enrollee: ____

Name of Patient: ____

Patient is ___ **self** ___ **dependent** ___**other** (explain)______________________________

The following is a detailed description of the concern or complaint:

____

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DETACH AND / OR COPY DETACH AND / OR COPY DETACH AND / OR COPY DETACH AND / OR COPY DETACH AND / OR COPY DETACH AND / OR COPY

THE PRESIDENT'S PAGE—PERSONAL INSIGHTS

Be For Us

"If not me for me, then who for me? And if not now, then when?"

The words of Hillel, sage of ancient Israel. These words, preserved forever in *Ethics of the Fathers*, are commonly regarded as an ancient statement of what we refer to as enlightened self-interest. Unfortunately, Hillel's true message was contained in the usually unquoted third sentence of the passage, which continues, "But if I am only for myself, then what am I?"

Let's turn that last question towards ourselves. If we physicians are only for our individual selves, what are we? Succinctly put,

- **We are "providers."** Utilitarian, socially required cogs, here to be used and then discarded. Highly trained professionals who are nonetheless regarded by many politicians and businessmen as substantially interchangeable with other professionals and paraprofessionals of variable, often minimal, training.
- **We are "easy targets."** Targets of MCOs and HMOs for downcoding, delayed payment or nonpayment, mid-contract changes, betrayals of trust, and ultimately, targets for plan deselection. In short, to many we are a collection of financially vulnerable small businesses facing behemoth corporations in an increasingly corporatist society.
- **We are highly vulnerable individuals.** Individuals who face an ever-enlarging government which seemingly delights in making criminals out of physicians through ever more complicated E/M coding requirements, through overreaching "fraud and abuse" legislation, and even through programs which would seek to make "whistleblowers" out of the very senior citizens for whom we care! Vulnerable individuals who risk federal lawsuits when we simply talk to one another about certain professional matters!

Indeed, it's not surprising that the government attempts to enforce the Sherman Antitrust Act against individual physicians with a vigor that in many cases exceeds it's sixteen-plus year crusade against IBM, or it's current assault on Microsoft! After all, government's plan for our profession's future, and its current corporatist solution to our purported health care crisis requires that it face an unorganized and dispirited profession. So our separation from one another is of necessity rigorously enforced by law, in order to maintain our vulnerability.

Fortunately, there is an effective way to face these problems. It is through all of us, joined together, in the Connecticut State Medical Society. CSMS is able to bring resources to bear on some of these issues in ways that would be impossible if we weren't united by our statewide organization. Just consider the problems that I've already enumerated, and then take a look at a small sampling of CSMS's numerous responses.

Together through CSMS, we have successfully fought the onerous implications of that generic "provider" label, and we have defended our unique and extraordinarily skilled profession in numerous ways.

- With AMA's assistance, we brought our difficulties with Aetna's "all-products" contract forcefully to the public's attention. We succeeded in obtaining a very public promise from the state's Attorney General to investigate this contract. And, concomitant with exposing the terms of this contract to public scrutiny, we effectively brought to everyone's attention the perverse financial incentives and the restrictions on specialist referrals that are intrinsic to almost all managed care contracts.
- After holding off a legislative challenge from the optometrists who wanted to perform laser surgery, we obtained a declaratory ruling from the Connecticut Medical Examining Board declaring the use of medical lasers as "surgery" and thus within the practice of medicine.
- We went all the way to the Connecticut Supreme Court to see to it that podiatrists didn't get to add the ankle to the legal definition of "foot."

Continued on next page

- We have been legislatively active, carefully intervening in efforts by nurse practitioners to expand their scope of practice.
- We launched the first-of-its-kind public relations program entitled *The M.D. Makes the Difference* using newspaper ads, radio spots, and billboards. Initial feedback has indicated that this program "reached" both the public and our legislators.

CSMS also acts however it can to put shields around practicing physicians so that the "pot shots" that are continually directed at us are successfully deflected. Sometimes this involves courtroom activities by CSMS of which our membership may be totally unaware. Let me cite some examples for you, both in the courts and beyond.

- When CIGNA deselected physicians in New Britain in violation of a law that CSMS had helped to enact, we supported physician efforts to fight that deselection by providing the doctors with an *Amicus* brief from both CSMS and the AMA. We won in the Connecticut Supreme Court. The power of ERISA preemption has been seriously undermined as a result of our efforts.
- We successfully protected the peer review privilege from legal assault in a Connecticut Superior Court case. That ruling will serve as a powerful precedent against any future attack on medical peer review.
- We carried on extensive negotiations with the Worker's Compensation Commissioner and managed to achieve a fairer statewide Worker's Comp Fee Schedule than would have otherwise prevailed.
- When malpractice insurance companies decided to abandon us because they couldn't squeeze sufficient profit out of us, we formed the highly successful Connecticut Medical Insurance Company (CMIC). We now have a flourishing and highly competitive malpractice insurance market in Connecticut due, in large part, to the initiatives of CSMS.
- We worked hard to obtain substantial managed care reforms, including an external review process, only the second one enacted in the United States. Both in 1997, and again in 1999, CSMS was the acknowledged leader of the statewide coalition to secure managed care reform.
- With strong input from our Carrier Advisory Committee to Medicare, CSMS is working with the AMA and other state medical societies to prevent implementation of the faulty E/M coding guidelines.

This is just a small sampling of the activities that the Connecticut State Medical Society carries on. But we can do these things only through the active support and assistance that we receive from each individual member in the society.

The profession of medicine is under assault from many directions, and we know that physicians are going through difficult times. We promise to be here for you.

In return, we ask you to be for us. Now. Because if we are together and united, no one will ever ask, "what were they?"

Stephen R. Katz, M.D.
President

Medical Policy

Delivery of DMEPOS Items Prior to Hospital Admission

DMEPOS items that will be used initially in the hospital should not be delivered to a patient prior to the hospital admission. These items should not be billed to the DMERC. Any item initially used in the hospital is considered included in Medicare's payment to the hospital. The supplier must seek reimbursement for the item from the hospital. This would be true even if the item is custom fabricated—eg, a brace that is applied after spinal surgery, etc.

Those items delivered to a patient in the hospital up to two days before discharge to home, for purposes of fitting or training of the patient on its use in the home, may be billed to the DMERC. (Refer to article "Delivery of DMEPOS Items prior to Discharge" in Region A, DMERC Medicare News, December 1998, page 4.)

REFLECTIONS ON MEDICINE

Doing Right or Being Right?

ROBERT U. MASSEY, M.D.

> … there really are bad guys and good guys. The good guys must learn to be vocal, active, and assertive. The bad guys already are. Neutralists must be feared because they can be used.
>
> —Solomon Papper.[1]

SOLOMON Papper was the first chairman of medicine at the then new University of New Mexico School of Medicine, now almost 40 years ago. I had been involved in the early planning for the new school and played a small part in his recruitment; even before his arrival we had become good friends. Later we became close friends and colleagues, often lunching at some place remote from either of our institutions, especially when the conversation might be conspiratorial! He was the first faculty member on board after the appointment of the founding dean, Reginald H. Fitz.

Sol chaired and I served on the first human research review committee, a new thing under the sun in those days, which served both the medical school and the Lovelace Clinic and Foundation, and together we worked out the guidelines for making judgments in what, for me at least, was new territory. Sol's knowledge of philosophic ethics was much deeper than mine. We learned quickly the dogmatic principles of the burgeoning field of medical ethics, today summarized in the mantra: autonomy, beneficence, nonmaleficence, and justice. But Sol kept returning to what he called etiquette, the "little ethics," the day-to-day habits of the good physician and good person.

I soon understood what he meant by his "little ethics," and the students and house staff slowly learned by their chief's example. Occasionally we made rounds with students and house staff together, sometimes at our place, more often at the Bernalillo County-Indian Hospital or the VA which were the university's teaching hospitals. After we had entered a patient's room, Sol made the introductions, always including house officers and students, commented about her flowers or the weather or the view from the window of the Sandia mountains, washed his hands, fluffed up her pillow, straightened the blankets, and almost always, I noticed, loosened the tight sheet at the foot of the bed. The medical history, Sol reminded us, was to find out "What is troubling you?" and "What kind of person are you?"—questions that were woven unobtrusively into an otherwise simple, friendly conversation. A brief but careful examination followed, plans for the day reviewed, and the patient was encouraged to ask any questions she might have. There was never a sense of urgency, no hint of "I'm a very busy guy, and I'm in a hurry." He often sat down at the bedside, maybe held the patient's hand, or offered her a glass of water. After rounds, we went back to his office, closed the door, and proceeded to review all the charts. No discussions of diagnosis, prognosis, or plans ever took place in the patients' rooms or in the hall where others might overhear.

The professor and chairman spent half his day in the clinic, the rest as an academician:

> I spend half my day or more on rounds, at conferences, talking medicine, reading, or writing. The effort to do so is great, but the hazard of being less of an internist … is greater.
>
> If we practice quality medicine on our inpatient services and in our ambulatory facilities, the clinical portion of our teaching programs for house staff and students will be largely accomplished. We can talk to house staff and students all we want about meticulous care, but unless we practice it and teach by example, our words are largely wasted.…
>
> If one believes that by far the best way to teach is by example, then the best way to teach humane scholarship is for the faculty to be humane and scholarly in their personal and professional behavior.[1]

Sol Papper was often humorously cynical about the arrogant nonsense that too often characterizes academic medicine, especially in its use of language that "has an increasing propensity to be indirect and obscure rather than to clarify," and "uses a glossary of terms in some variable ways, so that one must know the ground rules … to interpret what is said." Here are a few of his definitions of terms that are heard in almost all faculty meetings:

ROBERT U. MASSEY, M.D., Professor Emeritus, Division of Humanistic Studies, Department of Community Medicine and Health Care, University of Connecticut School of Medicine, Farmington.

opportunity—A long shot.
challenge—A long shot without money or space.
resources—An incantational near substitute for money.
potential—"Age 45, excellent training, and meager accomplishments."
team, team player—In the positive sense, this is someone who agrees with the dean or chairman. I have visions of somebody having a team sweater, a proper team haircut. In the negative sense (not a team player), he can be viewed as a conspirator.
influential—Big mouth.
multidisciplinary—Without leadership.
integrated—Fully organized but without content.
relevant—Quality not required.
multifaceted—Chaos.
participatory democracy—There are two types: (1) no voice for anyone; (2) voice for all: nothing done.
interdepartmental—Make certain medicine and surgery are not in leadership roles.
curriculum designs
lockstep—The old curriculum, whatever its form.
longitudinal—One step does not lead forward to another.
horizontal—See **integrated.**
spiral—Everything is screwed up.
low profile—Hiding from the combat zone.
paranoid—one who *usually* disagrees with the dean or chairman.
immature—one who *often* disagrees with the dean or chairman.
compromise—Least and lowest common denominator.
progress—Curriculum change.
essentially—Plus or minus 100 percent.
focus—Ignore everything except my point.
mission—Improve parking.
solution—Refer to a committee.[1]

In his discussion of the arcane language of faculty meetings, he quoted Harry Truman: "If you can't convince them, confuse them."

Two principles guided Sol Papper's all too short life in medicine, and his colleagues and students heard them again and again: "Doing right as distinguished from being right in patient care is a practical issue and not one of philosophical abstraction.... Doing right has greater value because patient management and not diagnosis (being right) is our first concern and commitment." The other was his conviction that medicine, especially academic medicine, rests upon *humane scholarship,* which he defined in Buber's terms as concern for justice, compassion, and respect for scholarship. Instead of the traditional three-legged stool of education, research, and patient care, Papper proposed the three legs as education, research, and community, supporting a center of "people health," or care that takes into account the physical, emotional, social, and spiritual aspects of our being.

REFERENCE

1. Papper S: *Thirty-five Years in the Tower.* Boston/Toronto: Little, Brown and Company; 1985.

Cost-saving Purchasing Program for CSMS Members

M.D. Advantage, an affiliate of the Connecticut State Medical Society, and Diversified Network Services Inc. (DNS) are pleased to announce an exciting new **cost-saving** purchasing program. Diversified Network Services Inc. (DNS), the shared services/group purchasing affiliate of the Connecticut Hospital Association, and M.D. Advantage have joined together to provide CSMS members with special pricing on numerous products and services for you and your practice.

There are no membership dues or fees passed along to you or the Society. The Board of Directors of M.D. Advantage has endorsed the program and strongly encourages all CSMS members to evaluate and utilize the program to its fullest extent. Your participation in this program will directly benefit the Society and its activities, based on the agreement with DNS.

In April, the Society mailed to all its members a letter explaining the program, a membership application and a contract index form listing all the vendors that are available to physicians. If you are interested in reviewing any of the vendor savings available to you at no additional cost, please complete the forms and return them to the DNS office (fax: (203) 265-9130). Additional forms are available by contacting Susan Schaffman at the Society, (203)865-0587.

If you have any questions or require more information, please call DNS at (203) 294-7380, or log onto <www.csms.org> for a direct link to the DNS website <www.dns-ssp.com>.

This Month's Reading in Review

TIMOTHY B. NORBECK

Oh, Really!

"We're an administrator; if medical mistakes are made, it's the doctor's fault, not Aetna's."

Aetna CEO Richard Huber, attempting to explain why it wouldn't be fair for Aetna or other managed care organizations to be sued by patients. *Wall Street Journal* (6 October 1999)

"The American people must have the right to sue those HMOs which, in the name of cost-cutting, deny patients medical care on which their lives may depend. The House Leadership, remaining silent on a bill they themselves knew had to be introduced, gives the impression our party is in the pocket of the HMO industry."

Republican presidential candidate Gary Bauer on the patients' rights debate in Washington. *Washington Post* (18 September 1999)

A new report from the Lewin Group says the cost of treating America's growing number of obese adults accounts for a third of the cost of treating 15 major diseases, including diabetes, hypertension and stroke.... The report, commissioned by the American Obesity Association, predicts that the cost of treating obese patients will reach $238 billion this year.

New York Times (15 September 1999)

In April, prominent Canadian geneticist Robert Hegele told a conference in Edmonton, Alberta, that when he revealed to some Newfoundlanders in remote villages that they possessed a genetic flaw that increased their chances of heart disease, they were happy.... Their initial reaction, said Hegele, was, "This is great ..." they figured, "This means we're doomed, so we ... don't need to quit smoking or [stop eating fatty foods]."

Chuck Shepherd (1 June 1999)

"Hundreds of millions of dollars paid in health insurance premiums each year bypass doctors and hospitals, instead ending up in the pockets of health insurance brokers, the middlemen who help employers decide which health plan to purchase. Commissions can range from as low as 2.2% of the premium amount spent by extremely large employers, to as high as 20% of the premium spent by individuals and small businesses." The average commission range, brokers claim, is between 4% to 8%."

The Sacramento Business Journal (13 September 1999)

"In the age of tight reimbursement, that's a well-concealed piece of the health care dollar."

Tom Elkin, former director of CalPERS (California Public Employees Retirement System health benefits program), commenting on those broker fees.

A 19-year-old personally investigated whether a .22 caliber bullet inside a straw could be ejected by hitting it with a hammer.... The answer: sometimes, including this incident, which left him hospitalized in Salt Lake City with a stomach wound.

News of the Weird (23 September 1997)

"Failure to honestly address the abuses of health insurers will cement the growing perception that this is a do-nothing Congress."

From a *Las Vegas Sun* editorial (4 October 1999)

"Signaling the beginning of a wave of litigation aimed at HMOs, a team of lawyers yesterday filed suit against Humana, Inc. in U.S. district court in Miami, alleging that the insurer 'pays bonuses to claims reviewers and doctors to limit medical coverage' without revealing the incentives to its patients. Plaintiffs contend they did not receive coverage as portrayed by Humana 'because the company did not disclose incentives to doctors to deny care.'"

USA Today (5 October 1999)

"Mr. Bradley's blueprint can be labeled, without hint of sarcasm, the adult version of Mr. Gore's plan."

An *Albany Times Union* editorial, on the Bradley health care plan for the uninsured. (4 October 1999)

Only in America: The average cost of rehabilitating a seal after the Exxon Valdez oil spill in Alaska was $80,000.... At a special ceremony, two of the most expensively saved animals were released back into the wild amid cheers and applause from the onlookers.... A minute later they were both eaten by a killer whale.

Internet (5 October 1999)

TIMOTHY B. NORBECK, Executive Director, Connecticut State Medical Society, New Haven.

COMMITTEE SERVICE QUESTIONNAIRE

Connecticut State Medical Society

Early in the year 2000 the Councilors from the eight constituent county medical associations will assume the responsibility of selecting members of the Society to participate in the various activities of the Society, listed below. In making these selections it is of importance to choose physicians who are not only willing and able to serve but also who are known to have an interest in the work of the group to which they may be assigned. In order to enable this office to furnish the Councilors with a compilation of those who desire to be considered for committee service, members are asked to indicate by number in order of preference (not more than three) opposite your choice in the questionnaire below and return same to the:

Executive Director's Office
160 St. Ronan Street
New Haven, CT 06511

Your cooperation will be appreciated.

Medical Education

- ★ Committee on Continuing Medical Education

Medical Economics

- ★ Committee on Insurance
- ★ Committee on Workers' Compensation
- ★ Managed Care Patient Advocacy Committee

Professional Relations

- ★ Committee on Ethical and Judicial Affairs

Public Affairs and Communication

- ★ Editorial Committee on *Connecticut Medicine*
- ★ Committee on Legislation
- ★ Committee on Public Affairs

Scientific and Socio-environmental Medicine

- ★ Cancer Coordinating Committee
- ★ Committee on Physician Health
- ★ Committee on Maternal Morbidity and Mortality
- ★ Committee on Medical Aspects of Sports
- ★ Committee on Organ and Tissue Transfers
- ★ Committee to Study Perinatal Morbidity and Mortality
- ★ Committee on Public Health
- ★ Committee on Geriatrics
- ★ Committee on Medicare
- ★ Committee on Allied Health Services
- ★ Committee on Alcohol and Other Drug Dependency Education

Representative and Advisors

- ★ Representatives to Connecticut Advisory Council on School Health
- ★ Delegates to Connecticut Public Health Association, Inc.
- ★ Delegates to Connecticut Nutrition Council

Please return by January 15, 2000

Name:____ M.D.
(Please Print)

Office Address: ____

____

From the Executive Director's Office

COUNCIL MEETING

Wednesday, 13 October 1999

Attendance

Present in addition to the Chair, Dr. Hollister, were Drs. Aleali, Bigos, Conant, J. Czarty, Deren, Eslami, Goodrich, Handelman, Katz, Keating, Maloney, Montegut, Redmond, Schwartz, Sosa, Timmerman, Turner, and Wetstone.

Also present were Mr. Norbeck, Ms. Lindquist, Mr. Brunell, Ms. Morelli, Ms. Norbeck, Ms. Schaffman, and Mr. Sullivan (all CSMS staff); Mr. Coffey and Mr. Fiorentino (HCMA and NHCMA staff); Mr. Thompson and Ms. Phillips (FCMA staff); Mr. A. Schuman and Mr. M. Schuman (NLCMA, WCMA, MCMA, TCMA staff; Dr. Thompson, Mr. Lalime, and Ms. Mastriano (CSMS-IPA staff).

Absent were: Drs. Ahamed, Beck, Bobruff, Brooks, C. Czarsty, Franklin, Galvin, Geary, Geist, Herzog, Mansourian, Sadowski, Scarpa, Sindwani, Sridhar, Tesoro, Van Linda, and Wong.

Report of CSMS-IPA

Kenneth Lalime, Executive Director of the CSMS-IPA, reported that there have been some drastic changes since reporting to the Council at its last meeting on August 26. The CSMS-IPA Finance Committee meeting in August just before the last Council meeting, received reports that did not meet expectations. It was reported that the committee had initiated a detailed audit. Some of the issues uncovered were brought to the attention of the Plan. The Executive Committee and Board were not satisfied with the results they were getting and will continue to pursue the issues. The Board did not feel that the Plan was making a sincere effort in getting resolutions to the problems and, unfortunately, the only avenue left to solve the problem was to bring a lawsuit against the Plan to force the issues to the table and look for resolutions. Mr. Lalime reported on the CSMS-IPA Board meeting that was held to which Council members were invited. The meeting provided a forum to discuss all the questions involved. It was stressed that it is very important that physicians understand the issues. He and Dr. Thompson have been attending the various county meetings, as well as many other physician groups that requested their presence.

Dr. David Thompson, President of the CSMS-IPA, reported that as part of the sale of M.D. Health Plan, two things were received: money for the shareholders and a 15-year noncancellable contract which guaranteed that the physicians, not accountants, were going to be in charge of the medical care delivered to their patients. He stated that the 15-year contract is a very key issue. The primary effort at this point is that the physicians who make up the 27-member Board would be in control of how patients are treated medically. Because innumerable problems have not been resolved, a lawsuit had to be filed. The goal is to enforce the 15-year contract in which the physicians are in charge of medical care. What needs to be done is to get back to the original agreement and make it work. If this is accomplished, that would resolve many of the problems.

Report of the President

Dr. Katz reported that the past few weeks have been a most exciting time. "To see the CSMS-IPA assert itself on behalf of both the patients and the physician membership has been most gratifying." The unprecedented advertising campaign concerning the Aetna "all-product" contract carried out with the support and encouragement of the AMA could not have come at a more opportune time.

The Aetna initiative was appreciated by the membership. The CSMS staff worked through the summer trying to clear obstacles, and efforts were energized by Dr. Karen Laugel, a pediatrician practicing in Stratford. A letter to the Attorney General's office was hand-delivered outlining the CSMS effort, and Attorney General Blumenthal was very interested in the issues. He visited for quite awhile with the delegation that delivered the letter. The Attorney General then arranged a news conference on the subject. The attendant publicity to the ad campaign and the letter sent out to members and non-members concerning the efforts on their behalf have invigorated the doctors of Connecticut.

The President also reported on the meeting of officers and executive directors of the county associations and the State Society. It was positively received by all who participated, and discussions were open, candid and direct. The group made the following suggestions, some of which needed Council approval:

- That the county association presidents be invited to attend CSMS Council meetings as guests.
- That the Council agenda regularly include an item for "reports from the counties," which could be made by appropriate councilors on an ad hoc basis.
- That CSMS increase its help to the smaller counties with regard to legislative efforts.
- That the CSMS logo, when in appears in public material, have appended to it a listing of the county associations so as to create a "unified constituency logo" for the public to see.

- That seminar presentations receive joint county-state sponsorship and advertised as such whenever possible.

It is planned to continue these meetings, and the next meeting is scheduled in November. As of now, plans for that meeting anticipate discussion of the IPA, its current problems, and its anticipated future.

Dr. Katz reported that he had received a communication from the AMA asking that CSMS play an active role in seeing that the monies received by the state from the tobacco litigation settlement be used for tobacco control. According to Investors Business Daily, Connecticut is one of only five statesthat did anything related to tobacco and tobacco-related illness with the money and that Connecticut did the best of the five states. Dr. Katz stated that it was his belief that CSMS should take the lead by recommending possible direct anti-smoking and medical uses for this money and that CSMS should advocate, both in the public arena and with the state government, for the reimbursement of smoking cessation expenses and for medical insurance subsidies where they are needed.

Report of the Executive Director

Mr. Norbeck spoke of the Aetna ad campaign that was published in all the major newspapers. Copies of the ad and articles that appeared in the newspapers and AMA News were distributed to the members of the Council. The response to the ad was most gratifying, and letters and calls were received from many sources supporting the CSMS position. Dr. Katz's report included most of the details on the subject. A letter was mailed to all members and non-members outlining details of the Aetna ad campaign and also pointing out other achievements being carried out by CSMS. It was a pleasant surprise that in the first week, after the letters had been mailed, 29 responses were received asking for applications to join CSMS. It is believed that this effort will also strengthen the CSMS legislative presence and program next year as the feedback from legislators has been very supportive. Mr. Norbeck reviewed suits being carried out in other states against HMOs for a variety of reasons.

The "Norwood-Dingell Patients' Rights" legislation recently won a resounding victory, 275-151, in what should be a litmus test for the House members seeking reelection. All of Connecticut's delegation, except for Nancy Johnson, voted for the legislation. It was noted that probably time will run out before the Senate gets the bill, because Congress plans to adjourn at the end of October. There will be great pressure to have the Senate take up this bill early next year. Efforts will be made by some to stonewall the issue again in a conference committee.

It was noted that AMPAC membership is up nationally, but in Connecticut MDPAC is eight short of its membership at this time last year. Physicians should heed the call for membership, as next year will be a crucial year in legislative activities.

At the June meeting of the Council, funding was approved for four persons in the UConn Summer Research Fellowship Program for college students considering careers in medicine. Letters have been received from all four students recently, and they indicated it was a rewarding experience. One said, "It is uplifting that there are people out there that care about the pursuit of medicine and well-being of mankind." All of the students indicated their continued interest in medicine.

Mr. Norbeck pointed out that this was the last Council meeting for Dr. Joseph C. Czarsty and Dr. Jerome Bobruff, since they were going off the AMA delegation as of December 31, 1999. It was noted that both men played very active roles in organized medicine for many years. Their presence and counsel shall be greatly missed.

Council Guests

At the joint meeting of CSMS officers, county officers and executive directors held on September 29, it was suggested that county presidents be invited to the Council meetings. Dr. Hollister, Chair, asked for the opinion of the Council on this issue. Following discussion, Dr. Hollister stated that he would invite the county presidents as guests (nonvoting) to future Council meetings. He also stated that the role of the Associate Councilors and Councilors should be emphasized and that they are the only ones who can vote.

Dr. Hollister further stated that on future Council agendas, there would be an item entitled "County Reports," and each county would be listed

End-of-Life-Project

Dr. Francis Scarpa attended the End of Life Conference sponsored by the AMA and the Robert Wood Johnson Foundation. The goal of the seminar was to educate 250 physicians throughout the country on "End of Life" care. Courses have been developed on the subject, and some states are developing programs and sponsoring physicians to take the courses. Dr. Scarpa received a letter from the Maine Medical Association where an "Educating Maine Physicians in End-of-Life Care" program has been developed, and he was informed that they would welcome his participation as a faculty member at a meeting scheduled in Portland, Maine on March 24–25, 2000. Since Dr. Scarpa was not present at this meeting, the issue was put off until the next Council meeting, at which time Dr. Scarpa would be able to discuss the issue, including any financial involvement.

Council of New England State Medical Societies

Dr. Redmond reported on the recent meeting held in Waltham, Massachusetts. AMA delegates from the six New England states attend this meeting. Discussion at this meeting usually involves legislative efforts being taken in the different states: HMO problems, block voting and resolutions that would be introduced at the AMA meeting.

Guest Speaker

Dr. Hollister introduced Joxel Garcia, M.D., the new Connecticut Commissioner of Public Health.

Dr. Garcia stated that he has been the commissioner for five months. Since he has arrived he has dealt with three major initiatives: women's health, senior health and urban health problems. He has already put his resources to work on these issues, and programs have been initiated. His vision is to create a better health status in Connecticut and change the perception that people have about prevention. Dr. Hollister thanked Dr. Garcia for taking the time to meet with the Council. A reception in his honor followed his presentation.

Dates of Future Meetings

House of Delegates — Semi-Annual Meeting
Wednesday, 17 November 1999

Council Meeting—Thursday, 20 January 2000

House of Delegates—Annual Meeting
Wednesday, 10 May 2000

The Physician Health Program

- The **PHP** recognizes that most people may not know what to do when they suspect that a physician may be impaired, or how to help him.
- Referrals are accepted and come from many sources including colleagues, patients or friends, family members, and often from the affected physicians themselves.
- Referrals to the **Physician Health Program** are confidential, and experienced help is only a phone call away.

The **Physician Health Program**
is a service of the
Connecticut State Medical Society

For more information or to call in confidence, contact the **PHP** at
(203) 865-0587 or 1-800-635-7740

A confidential, effective, compassionate and responsible approach towards recovery

Neil J. Grey, M.D.
Medical Director

Michele R. Norbeck
Director

BOOK REVIEW

Chiropractic: The Greatest Hoax of the Century
by L.A. Chotkowski, M.D.
pp. 188, epilogue, references, addendum
New England Novelty Books, Kensington, Conn., 1998
$14.95. ISBN 0-9657855-1-3
Profits from the sale of the book will be donated to the
National Council Against Health Care Fraud

This book was brought to my attention last year by Dr. L.A. Chotkowski. The overwhelming theme is that:

> … the burden of scientific proof of effectiveness of chiropractic treatment has been thrust upon chiropractic for the past century. This chiropractor has failed to prove as chiropractic itself admits …

The book, like chiropractic itself, relies on newspaper articles, author research (three decades of primary care practice), and anecdotes to weave a story of concern. With the number of licensed chiropractors growing to 69,000 in 1997, the author defines the problem, reduces the issues and clearly pronounces a solution. He insists that chiropractic schools, as the osteopathic schools before them, "convert their colleges into standard medical schools."

With persistence to detail, he reviews the eight-member panel's recommendation to then secretary of H.E.W. Cohen in the early 1970s, noting that although chiropractic was accepted into Medicare provider status, the panel judged negatively because:

a. Chiropractic knowledge is not consistent with adequate scientific research.
b. Subluxation is not a significant factor in the disease process; spinal analysis and the adjustments are thus not fruitful.
c. Manipulation must be studied through suitable scientific research.
d. Inadequacies of chiropractic education and the deemphasis of proven causative factors and disease processes make it unlikely that an adequate diagnosis or treatment plan is possible.

There is a short visit to New York Chiropractic College and a review of the Principles and Practices of Chiropractic—the book known as the "Bible."

The author addresses the issues of risk management and concludes with the ominous note that "the chiropractic profession has existed for a century without having made a single notable contribution to the world's body of knowledge in the health sciences." However, an addendum does note that a Canadian chiropractic college studied asthma and spinal manipulation and no benefit was found. The second study from Seattle and Edmonton also concluded that chiropractic manipulation was only marginally better than the minimal intervention of a simple education booklet.

I believe that Dr. Chotkowski has successfully approached and defined the chiropractic arena medically, legally, congressionally, and personally.

I thank him for the opportunity to review this informative book.

C. Robert Biondino, M.D.
Wallingford

Policy Reminder: Home Blood Glucose Monitors

It is important to remember when submitting claims for blood glucose monitors with special features (E0609), that physician documentation of visual acuity must specifically state:

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CORRECTION

In the September issue of *Connecticut Medicine (Conn Med* 1999; 63:535–8) Dr. Thomson's name was misspelled as J. Grant Thomas, M.D.

The article entitled "The Double-Crush Phenomenon—An Unusual Presentation and Literature Review," authored by Khalique S. Zahir, M.D., Farrah S. Zahir, M.D., J. Grant Thomson, M.D, and Stanley J. Dudrick, M.D.

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Papers prepared on a word processor should be submitted on a diskette along with the hard copy.

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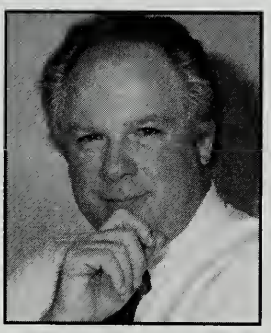

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A Complex Urologic Problem Demonstrates How Far Pediatric Urology Has Progressed

C.D. ANTHONY HERNDON, M.D., FERNANDO A. FERRER, M.D.,
AND PATRICK H. McKENNA, M.D.

ABSTRACT—*Objective:* We present the experience at Connecticut Children's Medical Center (CCMC) with single-system bilateral ectopic ureters (SSBUE), a rare clinical entity which continues to challenge the pediatric urologist. Innovative diagnostic and reconstructive techniques are utilized in an effort to preserve renal function and develop urinary continence in a select group of patients.

***Methods:* A review of the English language literature was performed to identify all female patients with SSBUE and evaluate their treatment and outcomes. In addition, we present our experience with three cases of SSBUE at CCMC and describe the recent advances in the management of such patients.**

***Results:* From 1937 to 1999, 25 articles described 54 female patients with SSBUE. Patients were treated with a variety of reconstructive procedures that resulted in a low overall continence rate of 20% (eight of 39 reported outcomes). We evaluated three patients with SSBUE at CCMC. Our first patient had undergone three previous operations prior to her successful procedure at CCMC utilizing a new technique to achieve urinary continence in which a portion of the anterior bladder wall is used for bladder neck reconstruction. Our last patient was identified antenatally by the maternal-fetal obstetrician, evaluated postnatally by the pediatric urologist, and underwent formal urodynamics and proximal urinary diversion for an obstructed upper collecting system.**

No previous reports focus on antenatal identification, accurate postnatal diagnosis, urodynamic assessment and early intervention including upper urinary tract diversion, and staged Pippi Salle bladder neck reconstruction.

***Conclusion:* The CCMC experience with SSBUE demonstrates the recent achievements in complex urinary tract reconstruction that have taken place in pediatric urology. We describe diagnostic studies such as formal urodynamics and the growing trend to identify urologic problems antenatally. A team approach involving the obstetrician, pediatric urologist, neonatologist, and the pediatrician has been beneficial. As pediatric urology moves into the new millennium there are prospects for even more innovative diagnostic and therapeutic options for children with urologic problems.**

Introduction

An ectopic ureter is defined as a ureter that inserts distal to the bladder neck. The incidence of ureteral ectopy is reported by Campbell[1] to be one in 1,900 births and there have been over 500 cases reported in the literature (Cox and Hutch).[2] Single-system bilateral ureteral ectopy is a recognized but rare event (Cox and Hutch).[2] Only 76 cases of SSBUE have been reported in the English literature (55 females, 19 males, and two unspecified).[3-22] Typically a noncompliant, low-capacity urinary bladder results from the ectopic insertion of both ureters outside of the bladder during the crucial time of bladder development. Historically, the management of SSBUE has ig-

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C.D. ANTHONY HERNDON, M.D., Urology Resident, University of Connecticut School of Medicine, Farmington; FERNANDO A. FERRER, M.D., Fellow in Research/Pediatric Urology, John Hopkins Hospital, Baltimore; PATRICK H. McKENNA, M.D., Associate Professor of Surgery (Urology) and Pediatrics, University of Connecticut School of Medicine, Farmington, Director of Urodynamics, Connecticut Children's Medical Center, Hartford.

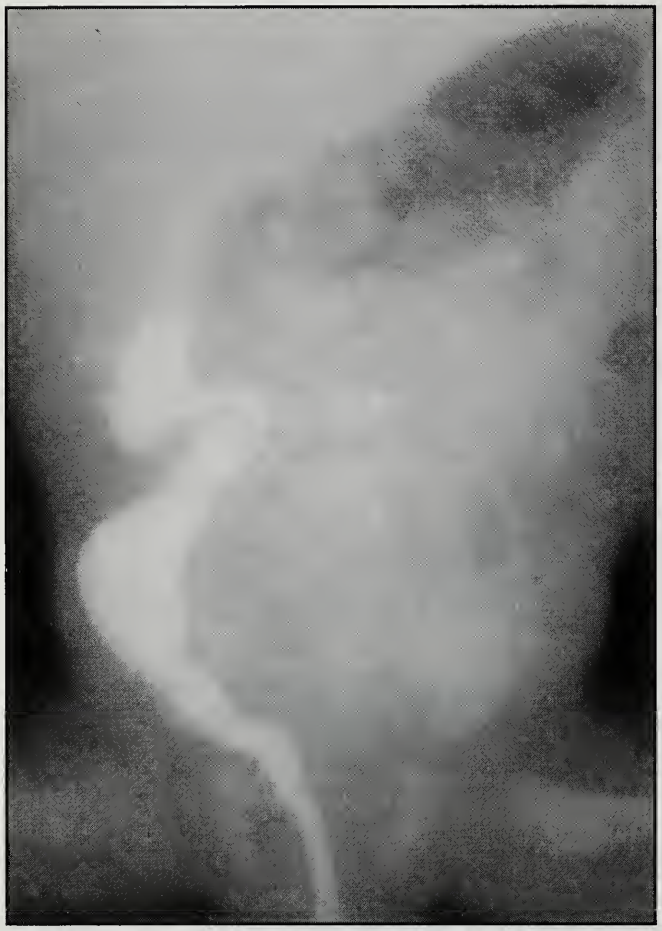

Figure l.—Case 1—Attempted cystogram with intubation of ectopic right ureter.

nored the fundamental principle of a defunctionalized bladder and incompetent bladder neck resulting in poor overall urinary continence after reconstruction (20%).[3–22] Our management of three cases of SSBUE parallels recent achievements in pediatric urology in the areas of complex urinary reconstruction and antenatal identification of genitourinary abnormalities. Focusing on a multispecialty approach facilitates effective communication and continuity of care from the antenatal period through the early and crucial postnatal periods.

Materials and Methods

A MEDLINE search of the English literature from 1937 to 1999 was performed by a senior clinical research librarian using the key words ectopic ureter, bilateral single ectopic ureter, and urinary incontinence. Selected articles were reviewed for sex, age at diagnosis, renal preservation, early management and reconstruction, and long-term continence.

For comparison, we reviewed three Connecticut cases: one historical, the second and third incorporating a modern approach.

Results

A review of 25 articles identified 76 patients with SSBUE. Of these, 54 female patients with bilateral ectopy were identified. None of the cases were identified antenatally. Males were excluded from this analysis because their external sphincter is always distal to the ectopic ureters and they maintain continence. Male infants do not have the same properties of poor bladder capacity encountered by females. Previous authors reported an overall urinary continence rate of 20% after reconstruction. We found that adequate bladder capacity was a key variable directly related to a successful outcome.[12–14,16] Authors reported that in three of the four successful reconstructions, a bladder of adequate capacity prior to surgery was documented.[12–14,16] The remaining four cases underwent a surgical closure of the bladder neck and an alternative site for catheterization. The approach to diagnosis usually included an imaging study (intravenous pyelogram (IVP) or voiding cystourethrogram(VCUG)) followed by cystoscopy and urethroscopy. Only eight of the 21 patients reported a normal creatinine, suggesting many had significant renal injury.[1–3,7,9,11,16,17]

Case 1.—A 12-year-old girl presented at birth with bilateral hydronephrosis followed by recurrent urinary tract infections (Figs. 1 and 2). A VCUG shortly after birth revealed bilateral ureteral ectopy with left hydroureter. A nuclear renal scan confirmed normal renal function. Cystoscopic findings confirmed bilateral ectopic ureters inserting into the midurethra and an absent trigonal complex. By six years of age three unsuccessful reconstructive procedures directed at achieving urinary continence had been performed.

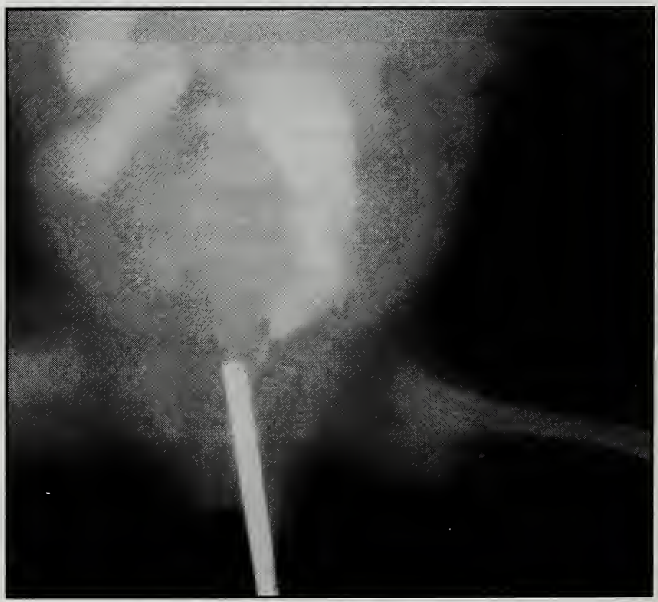

Figure 2.—Case 1—Bilateral retrograde pyelograms.

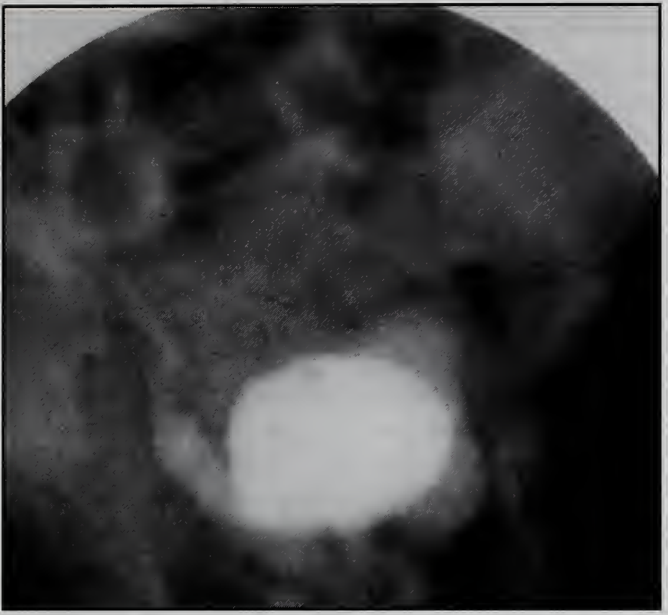

Figure 3.—Case 2—VCUG demonstrating bilateral ureteral reflux with ureters entering the midurethra.

At 11 years she presented to this hospital (CCMC) and a VCUG revealed high-grade left ureteral reflux and the patient remained incontinent of urine. She was placed on medical treatment with antispasmodics, alpha adrenergic agents, and clean intermittent catheterization (CIC) with no improvement in her incontinence or reflux. A nuclear renal scan demonstrated decreased function bilaterally with the left side worse than right.

The patient and family elected to proceed with surgery aimed at preserving/improving renal function as well as achieving continence. The patient demonstrated a low-capacity noncompliant bladder which placed her upper tracts at risk for further deterioration. Bladder augmentation with a 40 cm segment of ileum was used to restore the bladder to a low-pressure reservoir with a capacity in the range of 300 cc. To address her incontinence a reconstruction of the bladder neck was performed utilizing a Pippi Salle procedure.[23] The Pippi Salle procedure lengthens the urethra by using an anterior bladder flap for bladder neck reconstruction. A six-week postsurgical repair VCUG revealed a healed neobladder. CIC was delayed due to difficulty catheterizing because of the ectopic ureteral stumps in her urethra which were left behind after the previous operation. The patient eventually mastered CIC using a Coude catheter and is now dry with stable upper urinary tracts and a creatinine of .8.

Case 2.—A female neonate presented at 15 days of life with urosepsis and an elevated creatinine of 2.2. An ultrasound revealed bilateral hydronephrosis with a large dysplastic left kidney causing respiratory compromise and right hydroureter. A VCUG demonstrated single-system bilateral ectopic ureters inserting into the midurethra (Fig. 3). A nuclear renal scan revealed nonvisualization of the left kidney confirming the diagnosis of a dysplastic nonfunctioning left kidney.

At eight weeks a left nephrectomy and right diverting ureterostomy were performed. At one month, a postoperative ultrasound demonstrated almost complete resolution of hydronephrosis. Poor corticomedullary differentiation indicative of renal scarring and atrophy was noted, as well as evidence of dysplastic changes in the cortex of the kidney. Despite these findings, her creatinine had fallen to 0.4 and she remained normotensive. A seven month postoperative ultrasound revealed that right hydronephrosis had not returned. Formal urodynamics revealed a noncompliant low-capacity bladder. Staged reconstruction is planned at a later date.

Case 3.—A female infant presented antenatally at 32 weeks with left hydronephrosis and hydroureter and known Trisomy 16. At 36 weeks the child was delivered by cesarean section for progressive intrauterine growth retardation with APGARs of 5 and 8. A VCUG demonstrated a small-capacity bladder and an ectopic right dilated ureter with grade III reflux inserting into the midurethra (Fig. 4). A left antegrade pyelogram was performed through a nephrostomy tube and demonstrated changes in the kidney calyces consistent with obstruction and a left hydroureter entering ectopically into the midurethra. At two weeks of age formal urodynamics revealed a bladder

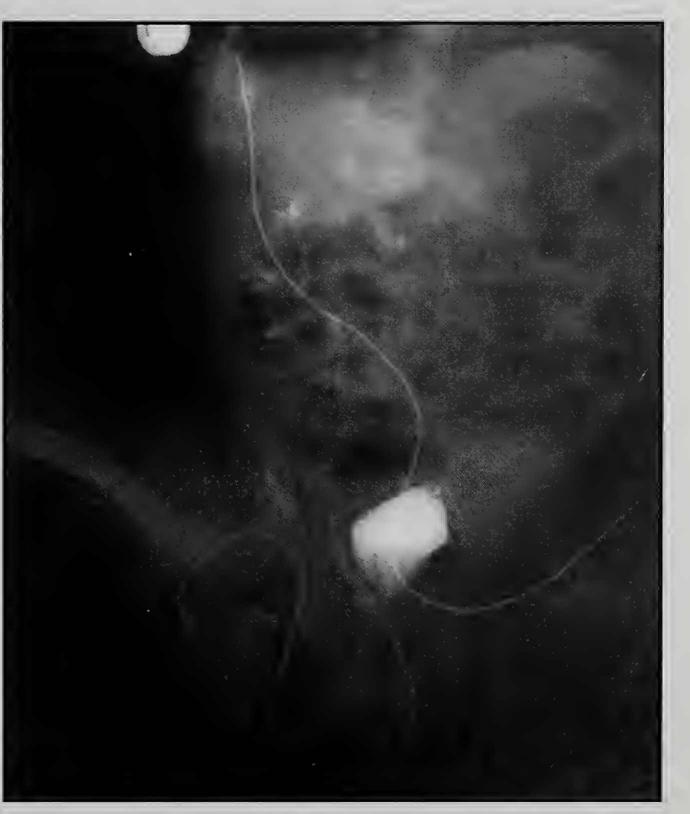

Figure 4.—Case 3—VCUG demonstrating Grade III ureteral reflux and right ectopic ureter inserting in midurethra.

capacity of just 3 cc (normal 60 cc) and demonstrated a low urethral closure pressure confirming the suspected effect that ureteral ectopia has on the continence mechanism and bladder development.

At two weeks an elective left upper tract urinary diversion was performed with a pyelostomy. The right side, without significant obstruction, was not diverted. The patient had stable renal function thereafter with a creatinine of .6. The patient will be followed by ultrasound with reconstruction planned for a later date.

Discussion

Pediatric Urology has emerged as a specialty in which recent advances allow for the early identification and management of complex urologic abnormalities detected antenatally. Our three cases of SSBUE each highlight a specific development in the field of pediatric urology over the last several decades in the areas of innovative complex reconstructive urologic surgery and the utilization of antenatal ultrasound with a multidisciplinary approach to complex care.

SSBUE traditionally has been managed symptomatically without an understanding of its true pathogenesis. This has resulted in poor overall urinary continence. The three features of SSBUE are: neonatal obstructive uropathy that occurs secondary to bilateral ureteral obstruction at the level of the bladder neck, nonfunctional urinary continence mechanism secondary to dilated obstructed ureters tunnelling through the bladder neck during development, and the inadequate in-utero development of the bladder. The ectopic ureters bypass the bladder which is not cycled with urine at a critical time of its embryologic development. In the absence of in-utero bladder cycling of urine, the bladder becomes "defunctionalized". Urodynamic evaluation of the defunctionalized bladder in patients with SSBUE confirms the suspected low-capacity low-compliant reservoir and aids in planning future augmentation cystoplasty.

To address the persistent urinary incontinence in these patients, surgical closure of the bladder neck and the Mitrofanoff technique to develop an alternative site for catheterization, is recommended. The Mitrofanoff involves removing the appendix from the colon while preserving its blood supply. The tip of the appendix is tunneled into the urinary reservoir much like the ureter that is surgically reimplanted for vesicoureteral reflux. The base of the appendix is fashioned to the umbilicus and a stoma is created which allows a nonsensate alternate catheterization site. This technique has been used successfully by others in managing patients with SSBUE.[22] Our patient elected not to undergo the Mitrofanoff procedure because she did not want a stoma on her abdomen. She preferred to catheterize her urethra and we felt that the Pippi Salle procedure combined with bladder augmentation was a reasonable alternative to address her incontinence and small-capacity bladder. This technique had never before been described for this congenital problem.

The Pippi Salle bladder neck reconstruction is a new procedure that fashions an anterior strip of bladder wall and secures it to the floor of the bladder. The anterior bladder is closed over an elongated urethra which maintains continence by a valve mechanism. The anterior bladder wall acts as a flap valve. An advantage of the Pippi Salle procedure is that the flap acts as a "pop off valve." One of the main problems with bowel augmentation of the bladder associated with bladder neck reconstruction is the potential risk of life-threatening bladder perforation if the augmented bladder becomes over distended. The Pippi Salle provides a low-pressure continence mechanism which leaks if increases in bladder pressure develop, thus perforation is unlikely to occur. By combining the principles of the Pippi Salle bladder neck reconstruction and bladder augmentation, a compliant and continent urinary system was created.

Our third case represents the first report of SSBUE detected antenatally. Prior to screening antenatal ultrasound, the most common manifestation of a urologic abnormality was a flank mass, fever, and pyelonephritis in the neonate. Strong evidence suggests that the initial infection is responsible for much of the deterioration in renal function that occurs.[24] Antenatal ultrasound has revolutionized the management of congenital anomalies in the pediatric population over the last decade. The pediatric urologist can now engage an asymptomatic patient early in the postnatal period long before he or she presents with symptoms. The combined multispecialty approach involving the maternal-fetal obstetrician, pediatrician, and pediatric urologist better serves this perinatal population. Connecticut has had strong maternal-fetal and neonatal programs with a state of the art transportation system but only recently has the pediatric urologist become involved in this process at CCMC. The Society for Fetal Urology, an international organization committed to clinical research and developing guidelines concerning antenatally detected urologic abnormalities, is based at CCMC.

In summary, SSBUE is an entity that exemplifies the changes that have occurred in pediatric urology over the last several decades. Antenatal detection of urologic abnormalities, a team approach to care involving the maternal-fetal obstetrician, neonatologist, and the pediatric urologist, and postnatal diagnostic modalities such as formal urodynamics and complex urologic reconstructive surgery have contributed a great deal to the care of these patients.

Conclusion

SSBUE is a rare congenital urologic disorder that demands the full extent of complex surgical techniques and diagnostic studies available at a tertiary pediatric facility. We present our experience at CCMC with the first report of a patient identified antenatally with SSBUE, the first report of patients in which urodynamics were used to plan intervention, and the first report of a case managed with the Pippi Salle procedure and bladder augmentation.

Dr. Howard I. Hochman contributed one case to this manuscript.

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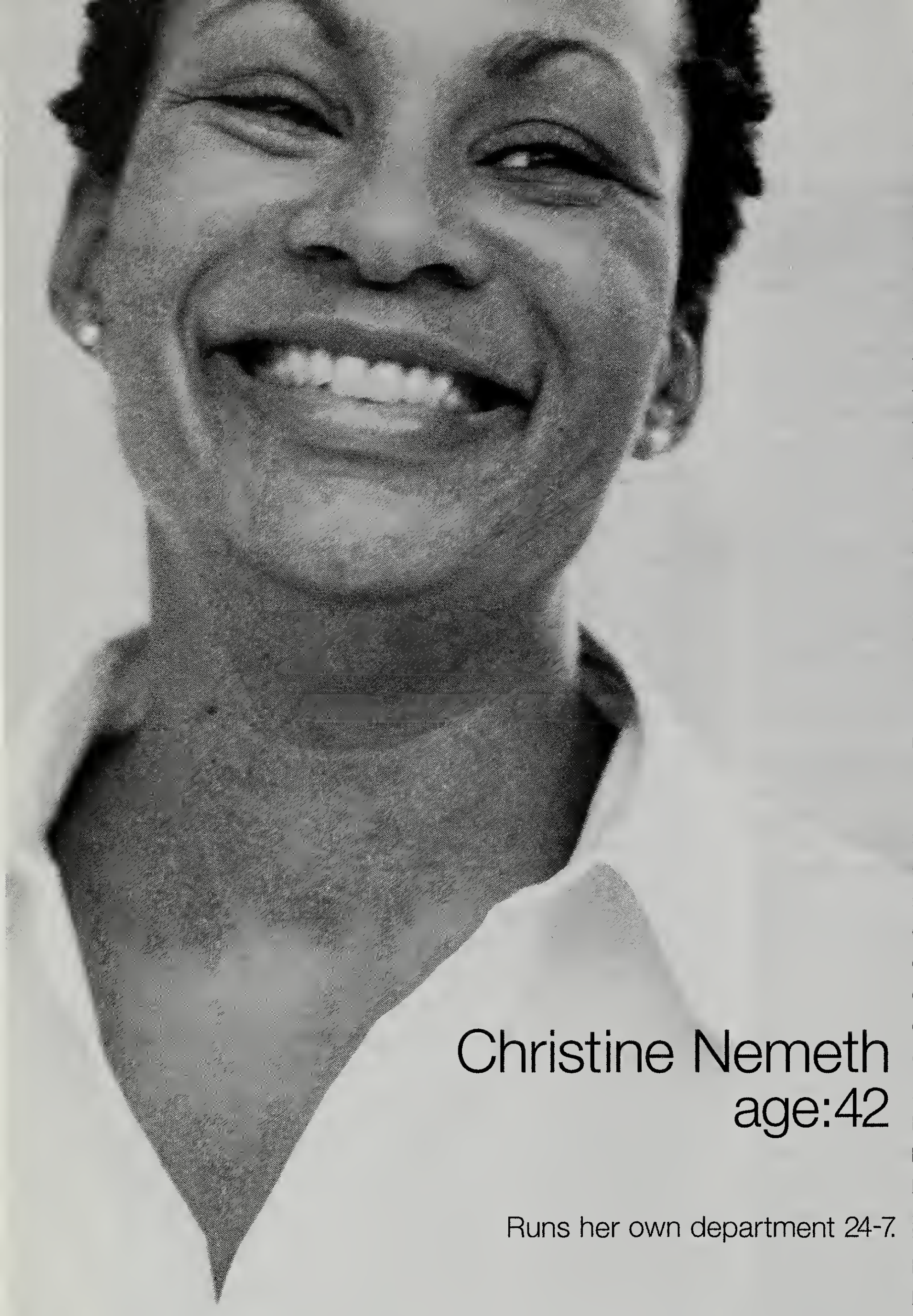

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Safety and Costs of Treating Neutropenic Fever in an Outpatient Setting

SALVATORE A. DEL PRETE, M.D., SCOTT P. RYAN, JUDITH S. JACOBSON, DR.PH,
ROBERT B. ERICHSON, M.D., PAUL L. WEINSTEIN, M.D.,
AND VICTOR R. GRANN, M.D.

ABSTRACT—*Purpose:* The purpose of this study is to analyze the safety of outpatient treatment for cancer patients with chemotherapy-induced neutropenic fever in a community hospital setting and to compare the costs of outpatient treatment with those of inpatient treatment for such patients.
***Patients and Methods:* We reviewed charts and charges for 32 consecutive patients initially treated for neutropenic fever with broad-spectrum antibiotics in the offices of Hematology/Oncology Associates (HOA) at the Bennett Cancer Center in the Stamford Hospital January 1997–June 1998. We also reviewed charts and charges for eight consecutive HOA patients with neutropenic fever who met the criteria for outpatient treatment but were initially hospitalized for other reasons during this period. We compared these two groups with respect to mean nadir absolute neutrophil count (ANC), mean number of days when ANC <1,000 cells cu mm, and mean number of days of intravenous antibiotic treatment. We compared costs for ambulatory and hospital care of the two groups using Health Care Financing Administration (HCFA) payments in 1998 as a proxy for costs.**
***Results:* Of 32 patients with neutropenic fever initially treated in the outpatient setting, only four required hospitalization. No patients in either group died in connection with neutropenic fever. Although outpatients received an average of 3.6 days and inpatients only 2.5 days of antibiotic treatment, outpatient treatment was significantly less costly than inpatient treatment.**
***Conclusion:* In a community hospital setting most cancer patients with neutropenic fever who meet certain criteria can be safely, effectively, and inexpensively treated as outpatients.**

NEUTROPENIA, one of the most common side effects of cytotoxic chemotherapy with or without peripheral blood stem cell support or myeloid growth factors,[1–4] is often complicated by fever and, in some patients, sepsis.[5] Until recently, patients with febrile neutropenia were routinely admitted to the hospital for administration of broad-spectrum intravenous (IV) antibiotics.[6–9] When the neutropenia resolved, the patient would be discharged, although patients whose blood cultures were positive might continue to receive oral antibiotics. In recent years, concerns about cost containment and patient satisfaction have led some oncologists to reevaluate the necessity of hospitalization for all such cases. Outpatient administration of broad-spectrum antibiotics is increasingly available to selected patients with febrile neutropenia.[10–13]

In 1996, our group developed a set of criteria for outpatient treatment of neutropenic febrile episodes based on a review of the literature and our clinical experience.[10–13] By the end of that year, we were routinely providing outpatient treatment for patients who met those criteria. The purpose of this study is to evaluate the safety of outpatient treatment in a community hospital for se-

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lected cancer patients with chemotherapy-induced neutropenic fever, to assess the validity of our criteria for outpatient treatment, and compare the costs of outpatient treatment with those of inpatient treatment.

Patients and Methods

This study is a retrospective analysis of outcomes in a cohort of neutropenic patients who presented to Hematology/Oncology Associates (HOA), an oncology group practice affiliated with and physically located in The Bennett Cancer Center of the Stamford Hospital Center in Stamford, Connecticut, from January 1997 through June 1998 (18 months). The criteria for neutropenic fever are:

- Temperature (100.5° F)
- Neutropenia, associated with chemotherapy, defined as Absolute Neutrophic Count (ANC) <500 cells/cu mm (or ≤ 1,000 ANC but expected to fall to <500 within 24 hours)

In December 1996, we decided that under certain circumstances we would provide outpatient treatment for neutropenic patients. After reviewing the efficacy of such treatment at several large cancer centers we agreed upon the following criteria for eligibility for treatment:

- No significant comorbidity, such as hypotension, intractable nausea, vomiting, or diarrhea, or significant pulmonary or neurologic compromise.
- Not living alone.

Patients who met these criteria were started on once daily ceftriaxone and gentamicin, administered in the outpatient center. The dose of ceftriaxone was 30mg/kg in 150cc of normal saline administered intravenously (IV) over 30 minutes not to exceed 2 grams. Gentamicin 5–6 mgs/kg in 150cc of normal saline was administered over one hour. Under certain circumstances (when a catheter infection was suspected), vancomycin 30mg/kg in 250cc normal saline was administered once daily (not to exceed 2 grams) at the rate of 1 gram per hour. Gentamicin and vancomycin dosing intervals were adjusted for renal dysfunction.

At their discretion, the oncologists could call for infectious disease follow-up consultations, which usually took place while the patient was at the center receiving antibiotic treatment. When cultures were negative, outpatient IV antibiotics continued until the ANC was greater than 500 cells/cu mm on two separate tests 24 hours apart or, in the case of proven or clinically documented infections, at the discretion of the oncologist. When cultures were positive, once counts recovered, and depending on clinical evaluation, intravenous antibiotics were stopped and oral antibiotics were considered to complete the antimicrobial regimen.

Laboratory data were collected as follows: baseline liver and renal functions were obtained at the initiation of therapy, on day three, and every day thereafter while therapy continued. Trough levels of gentamicin were drawn on day two and every third day thereafter while therapy continued. Vancomycin trough levels were drawn if: 1) renal dysfunction was present; 2) vancomycin was given concurrently with gentamicin. The vancomycin target level was <10 mcg/mL. For patients who remained febrile after five days or had positive fungal cultures from urine or blood, the oncologist would consider amphotericin. If herpes virus lesions appeared, the oncologist would consider acyclovir 10mg/kg every eight hours or 400 mg every four hours orally according to their extent. The oncologist could admit patients to the hospital at any time.

A few patients who otherwise met the criteria for outpatient treatment were hospitalized because they presented on weekends, when outpatient nursing support was not available. For our retrospective study we collected chart and charge data on these patients and on all patients who began treatment as outpatients for their first episode of febrile neutropenia during the study period.

Table 1. Clinical parameters by site of initial treatment*

Parameter	Inpatients	Outpatients
Age	56.5 (17.0)	61.5 (12.5)
Episode 1		
Nadir ANC	0.350 (0.342)	0.334 (0.256)
Days of antibiotic treatment	2.50 (1.31)	3.56 (2.31)
N	8	32
Episode 2		
Nadir ANC	0.700	0.271 (0.221)
Days of antibiotic treatment	1.00	3.43 (3.95)
N	1	7
Episode 3		
Nadir ANC	0.100	0.200
Days of antibiotic treatment	3.00	3.00
N	1	1
Episode 4		
Nadir ANC	—	0.500
Days of antibiotic treatment	—	2.00
N	0	1

*Values are means (SD) for N>1.

Table 2. Patients treated initially with outpatient antibiotics requiring hospitalization

Patient	Fever	ANC	Antibiotics	Reason for admission	Cultures	Hospitalization days
FR	103	600	Gentamicin and Cetriaxone	Persistent fever	Negative	19
KE	101	100	Gentamicin and Cetriaxone	Persistent fever and rigors	Negative	6
CY*	104	100	Gentamicin, Cetriaxone, and Vancomycin	Dehydration with nausea and vomiting	Negative	6
JT	101	100	Gentamicin and Cetriaxone	Persistent fever	Negative	6

*Stem cell transplant recipient

In order to identify all patients who were treated for febrile neutropenic episodes, we searched HOA records for the appropriate ICD9 codes and analyzed all hospitalizations for infection. We also evaluated all positive blood and urine cultures and cross-checked them against the HOA patient list. We excluded patients not currently receiving chemotherapy for cancer.

During the period of the study, all patients who presented with febrile neutropenia were evaluated by a medical oncologist at the Bennett Cancer Center. After physically examining the patient and obtaining appropriate cultures, the oncologist would either admit the patient to Stamford Hospital or initiate outpatient treatment. The criteria for outpatient antibiotic treatment were similar to those of Talcott et al[14] and are given above.

For both groups of patients, we recorded the patient's age, the type of cancer (solid or hematologic), and, for each episode of febrile neutropenia, the site(s) where the patient was treated (outpatient only, inpatient only, inpatient to outpatient, and outpatient to inpatient), the duration of neutropenia, the nadir ANC, the number of days on antibiotics, and culture results.

We used Medicare payments for 1998 from the Health Care Financing Administration (HCFA), supplemented with data on Part B payments made to physician practices in Connecticut, to estimate costs for consultations, hospital and office visits, and antibiotic administration.[16] We obtained costs for antibiotics from the 1998 Pharmacy Fundamental Reference.[17] We calculated costs for the initial day of treatment and for each subsequent day using the resource allocation described in Table 3.

All costs are given in 1998 dollars. Indirect costs related to loss of earnings or other medical conditions were excluded.

Results

Of 271 patients with chemotherapy-induced granulocytopenia who presented to HOA from 1 January 1997 through 30 June 1998, 76 had 104 associated febrile episodes. Of these patients 43 were ineligible at presentation for outpatient treatment. Thirteen were initially treated as inpatients either because they presented on a weekend or holiday or because they developed febrile neutropenia while hospitalized for another condition; five continued to

Table 3.—Inpatient and outpatient costs for intravenous antibiotic treatments

Resource use	Outpatients	Inpatients
Day 1		
Initial visit	65.08	157.64
Laboratory	16.53	
Blood culture	25.72	
Chest X-ray	52.06	
X-ray reading		12.48
Infusion 1 hour	48.98	
Infusion 2d hour	24.49	
Rocephin	99.52	
Gentamicin	10.95	
Vancomycin	28.12	
Infectious disease consultation	200.48	202.29
Total	*571.93*	*372.41*
Additional days ($/day)		
Physician visits	65.08	58.46
Laboratory	16.53	
Infusion 1 hour	48.98	
Infusion 2d hour	24.49	
Rocephin	99.52	
Gentamicin	10.95	
Vancomycin	28.12	
Infectious disease visits		58.46
Total costs per additional day	293.67	116.92
DRG Sepsis		5,935.21
Average days of treatment	4.5	3.5
Average total costs	*$1,893.45*	*$6,716.84*

receive antibiotic treatment following discharge and were excluded from the study. Thirty-two patients were initially treated as outpatients.

Clinical outcomes.—Table 1 shows the mean ages, nadir absolute neutrophil counts, and days of antibiotic therapy for initial inpatients and outpatients at each episode of febrile neutropenia during the study period. Of the 40 patients in the study, seven had a second episode of febrile neutropenia. Of the six initial outpatients, three, including one who had been hospitalized during the first episode, were treated as inpatients for the second episode. The sole initial inpatient who had any subsequent episodes received inpatient treatment for both. The sole initial outpatient who had a third and a fourth episode received outpatient treatment for both.

Of the 32 initially treated as outpatients during their first study episode (the outpatient group), four subsequently were admitted to the hospital. Their cases are described in Table 2. The major reason for admission was persistent fever. Three had ANC's of 100.

Costs.—Table 3 shows the components of and average total costs of outpatient and inpatient treatment. It is evident that inpatient costs are much higher than outpatient costs because of the DRG for sepsis. In our study, inpatients did not spend more time on treatment or incur additional costs.

Discussion

In the era of managed care and constant quests for more cost-effective ways of treating serious disease, there is reason to fear that standards of care will deteriorate. Although several studies have reported on the efficacy of outpatient antibiotic treatment for febrile neutropenia in academic medical centers,[10,13] this study is the first to compare the results of outpatient and inpatient treatment in a community hospital setting in the United States. Our primary concern was to demonstrate that patients could be treated as safely and effectively on an outpatient basis as in the hospital.

Outpatient treatment has been facilitated by the newer antibiotics, which are administered once a day, and by cytokines, which minimize the duration of neutropenia. We used those antimicrobial drugs that are generally recommended for neutropenic patients with unexplained fever, and our physicians evaluated the outpatients daily, as they would have evaluated inpatients.[2–5] We believe that our success also reflects our adherence to strict criteria for eligibility for outpatient treatment.

As other investigators have found, most of our patients, including the four who were initially treated as outpatients and were subsequently admitted to the hospital, had negative blood cultures and responded well to our antibiotic regime for fever.[9,10] Table 1 indicates that our inpatients and outpatients were comparable in nadir ANC, days of antibiotic treatment, and time to recovery. We did not choose oral antibiotics initially because of concerns regarding renal insufficiency and other possible complications.[12,18,19] In our study intravenous antibiotics were easily and safely managed in a community outpatient cancer center and required only once a day dosing.

Of the four outpatients who were hospitalized, one was a stem-cell transplant recipient who was admitted primarily for complications of high-dose therapy (eg, nausea, vomiting), although she also had neutropenic sepsis and Redman syndrome.

The others had persistent fever that resulted in an extended period of hospitalization, but none had identifiable adverse effects of initial outpatient treatment. Most patients appeared to prefer outpatient treatment.

Outpatient treatment of our patients was cost-saving because for similar outcomes and largely similar duration of febrile episodes, outpatients did not incur the DRG cost associated with hospitalization. The mean incremental cost savings was $4,823 per patient.

We conclude that cancer patients with febrile neutropenia who meet certain criteria can be treated safely, effectively, and inexpensively on an outpatient basis in the community hospital setting.

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DRUG INFORMATION UPDATE: HARTFORD HOSPITAL

Beta-Adrenoceptor Blockers in Heart Failure

JESSICA SONG, PHARM.D. AND C. MICHAEL WHITE, PHARM.D

Introduction

CHRONIC heart failure is a clinical syndrome characterized by the inability of the heart to pump blood in the forward direction at a rate sufficient to satisfy the metabolic demands of the body.[1] An estimated 4.8 million people in the U.S. are afflicted with heart failure, with 500,000 new cases diagnosed annually. Approximately 1.5% to 2.0% of the U.S. population have heart failure; the prevalence increases to 6% to 10% in the patient population aged 65 years and older.[2,3]

The pathophysiology of heart failure progresses through three phases. Initially, myocardial damage occurs secondary to numerous disease states or acute events such as coronary artery disease, hypertension, viral myocarditis, valvular disease, thyroid disease, and acute myocardial infarction.[1,2,4] Myocardial cell loss is followed by ventricular remodeling, which is manifested by myocyte hypertrophy and elongation. Pump failure resulting from ventricular remodeling promotes neurohormonal activation, which serves as a compensatory adaptation to decreased cardiac output. Neurohormonal activation culminates in the stimulation of the renin-angiotensin system (RAS) and the sympathetic nervous system (SNS). Detrimental effects arising from heightened sympathetic tone include cardiac arrhythmias, increased myocardial oxygen demand, down-regulation of beta-adrenergic receptors, and myocardial cell necrosis.[5,6] Finally, after prolonged ventricular dysfunction, heart failure symptoms become evident.

In recent years, much attention has been focused on targeting the SNS component of the neurohormonal pathway in treating chronic heart failure. This article will: 1) review the use of the beta-adrenoceptor antagonists carvedilol, bisoprolol, and metoprolol in clinical heart failure trials that evaluated mortality and 2) compare the metabolic and ventilatory effects of carvedilol, bisoprolol, and metoprolol.

Clinical Trials

Carvedilol (Coreg), an antagonist of the β_1, β_2, and α_1 receptors, is currently the only beta-adrenoceptor antagonist approved by the Food and Drug Administration (FDA) for use in the treatment of heart failure patients. FDA approval was granted based on the results of 4 clinical trials conducted by the U.S. Carvedilol Heart Failure Trials Program.[2,7–11] Briefly, this double-blind, placebo-controlled, stratified trial assigned 1,094 patients to one of four different protocols, based on their exercise capacities. The four groups of patients included mild, mild to moderate, moderate to severe, and severe heart failure patients. Patients underwent a two-week, open-label phase during which they received carvedilol 6.25 mg twice daily prior to randomization. The target dose of the active treatment group was carvedilol 25 mg twice daily in patients weighing less than 85 kg and carvedilol 50 mg twice daily in patients weighing more than 85 kg. The primary endpoint in all but one of the protocols was exercise tolerance. Secondary endpoints included changes in left ventricular ejection fraction (LVEF), New York Heart Association (NYHA) functional class, quality of life, and global assessment of heart failure symptoms. Interim analysis showed that the carvedilol group had a 65% lower risk of death than the placebo group ($P<0.001$). In addition, the carvedilol treatment group displayed a 38% lower combined risk of hospitalization or death than the placebo group ($P<0.001$). Due to the significant effect of carvedilol on survival, the Data and Safety Monitoring Board recommended early termination of the study. The mean duration of therapy was 6.5 months at the time of termination. The only consistently significant secondary endpoint favoring the carvedilol treatment group was

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LVEF. No statistically significant difference in exercise tolerance was observed between the placebo and carvedilol treatment groups. The U.S. Carvedilol Heart Failure Trials Program received criticism for employing an open-label phase and for failing to report all their nonsignificant endpoints in the summary report of their study.[12,13]

The mortality benefit of bisoprolol (Zebeta), a β_1-adrenoceptor antagonist, was recently examined in the moderate to severe heart failure population. The Cardiac Insufficiency Bisoprolol Study II (CIBIS-II) enrolled 2,647 patients, most of whom were classified as having NYHA functional class III heart failure.[14] All-cause mortality was the primary endpoint. Secondary endpoints included all-cause hospital admissions, cardiovascular mortality, cardiovascular hospital admissions, and premature treatment withdrawal. Patients were randomized to treatment with placebo or bisoprolol 10 mg once daily. An interim analysis revealed that the bisoprolol treatment group had a 32% lower mortality rate than the placebo group ($P<0.0001$). Based on the significant mortality benefit of bisoprolol, the study was stopped early. At the time of termination, patients had a mean follow-up time of 1.3 years. Other significant endpoints favoring bisoprolol included all-cause hospital admissions, cardiovascular mortality, and the combined endpoint of cardiovascular mortality and cardiovascular hospital admissions ($P=0.0049$, $P=0.0006$, and $P=0.0004$ respectively).

In the Metoprolol CR/XL (Toprol XL) Randomized Intervention Trial in Congestive Heart Failure (MERIT-HF), metoprolol CR/XL, a β_1-adrenoceptor antagonist, was studied in the treatment of moderate heart failure patients.[15] The MERIT-HF study population included 3,991 heart failure patients, who were randomized to treatment with placebo or metoprolol CR/XL 200 mg once daily. The primary endpoints were all-cause mortality and the combination of all-cause mortality and all-cause hospital admissions. The second interim analysis showed a 34% reduction in all-cause mortality in the metoprolol group compared to the placebo group ($P=0.0062$). Consequently, the independent safety committee recommended early termination of the study. The mean follow-up time was one year at the time of termination. Of interest, bisoprolol and metoprolol survival curves revealed delayed onsets of action (three months) along with steady increases in mortality benefit which persisted at 18 months.[14,15] This suggests that β_1-selective agents may exert long-term mortality benefits in heart failure patients. Results of the U.S. Carvedilol trials, CIBIS-II, and MERIT-HF are summarized in Table 1.

Since the protocols, patient populations, and follow-up times differed between the above mentioned trials, cross-comparing the mortality benefits of carvedilol, bisoprolol, and metoprolol in heart failure patients is fraught with difficulty. However, the vasodilatory, nonselective β_1-adrenoceptor blocker carvedilol exerted a nearly two-fold superior mortality benefit over the β_1-selective adrenoceptor blockers bisoprolol and metoprolol in almost half the time. At the six-month time point (based on visual inspection of survival curves), both the metoprolol and bisoprolol groups reduced mortality by approximately 35% *vs* placebo.[14,15] This is in comparison to a 59% relative risk reduction in the carvedilol trial. One proposed mechanism for the additional beneficial effect of carvedilol in heart failure patients involves its α_1-blocking capacity. Decreased afterload reduction may result in increased ejection fraction following blockade of $\alpha 1$-receptors.[16] One study directly compared the effects of metoprolol and carvedilol on parameters such as NYHA functional class, β-receptor density, and exercise tolerance in patients with idiopathic dilated cardiomyopathy.[16] Target doses of carvedilol and metoprolol were 25 mg to 50 mg twice a day and 50 mg two or three times a day respectively. Mean follow-up times for the patients on carvedilol and metoprolol were four and six months respectively. Patients treated with metoprolol experienced greater increases in β-receptor density than patients in the placebo and carvedilol treatment groups. In contrast, carvedilol induced a greater degree of improvement in NYHA functional class compared to placebo and metoprolol. Data from the Comparative North Scandinavian Enalapril Survival Study (CONSENSUS) also lends support to this proposed mechanism of action. Patients already on vasodilators prior to being randomized to placebo or enalapril experienced a significantly smaller reduction in mortality compared to patients who were not treated with vasodilators.[17] Unfortunately, the addition of α-1 blockade seems to increase the risk of vasodilatory side effects such as dizziness. Dizziness was the most frequently reported (33%) adverse reaction in the U.S. carvedilol trials.[11] Taking carvedilol with food and spacing it two hours from angiotensin converting enzyme inhibitors reduce the incidence of dizziness (Coreg®, SmithKline-Beecham). In addition to being a multiple adrenoceptor blocker, carvedilol is also a potent antioxidant.[16] Whether or not such a property will confer additional benefit in the treatment of heart failure remains to be confirmed.

Metabolic Effects of Bisoprolol, Metoprolol, and Carvedilol

The detrimental effects of nonselective β-adrenoceptor antagonists on carbohydrate metabolism and atherogenic lipid profile are well documented.[18] Nonselective β-adrenoceptor antagonists, and β_1-specific adrenoceptor antagonists to a lesser degree, elevate triglyceride plasma concentration and decrease high density lipoprotein (HDL) concentration and insulin sensitivity. β-adrenoceptor an-

Table 1.—Summary of MERIT-HF, CIBIS-II, and the U.S. Carvedilol Trials

	U.S. Carvedilol Trials[11] (Coreg)	**CIBIS-II[14] (Zebeta)**	**MERIT-HF[15] (Toprol XL)**
Target dose	25-50 mg twice daily	10 mg once daily	200 mg once daily
# Patients	N = 1,094 Placebo: n=398 Carvedilol: n=696	N=2,647 Placebo: n=1320 Bisoprolol: n=1327	N=3,991 Placebo: n=2,001 Metoprolol: n=1,990
Mean age (yrs)	Placebo: 58 Carvedilol: 58	Placebo: 61 Bisoprolol: 61	Placebo: 64 Metoprolol: 64
NYHA functional class (II%/III%/IV%)	Placebo: 52/44/3 Carvedilol : 54/43/3	Placebo: 0/83/17 Bisoprolol: 0/83/17	Placebo: 41/55/4 Metoprolol: 41/56/3
Primary endpoint	Exercise tolerance (in 3 of 4 protocols)	All-cause mortality	All-cause mortality and the combination of all-cause mortality and all-cause hospital admissions
Secondary endpoints	Changes in LVEF, NYHA class, quality of life, global assessment of heart failure symptoms	All-cause hospital admissions, cardiovascular mortality, cardiovascular mortality, and cardiovascular hospital admissions, and premature treatment withdrawal	None
Results	Placebo: 31 (7.8%) deaths Carvedilol: 22 (3.2%) deaths (*P*<0.001) 38% reduction in risk of hospitalization or death (*P*<0.001) in carvedilol group	Placebo: 228 (17.3%) deaths Bisoprolol: 156 (11.8%) deaths (*P*<0.0001) 25% reduction in cardiovascular deaths, 15% reduction in all-cause hospital admissions, and 17% reduction in combined endpoint (*P*=0.0049, 0.0006, and 0.0004 respectively)	Placebo: 217 (11.0%) deaths Metoprolol: 145 (7.2%) deaths (*P*=0.0062)

tagonist mediated decreases in the activities of lecithin cholesterol acyltransferase and muscle lipoprotein lipase may account for the observed increase and decrease in triglyceride and HDL cholesterol concentrations respectively. α_1-blockers exert the opposite (and beneficial) effects on triglyceride and HDL cholesterol concentrations. Decreased insulin sensitivity has been postulated to be caused by β-adrenoceptor antagonist induced attenuations in peripheral blood flow and insulin clearance.[18] Bisoprolol appears to induce minimal changes in HDL, low-density lipoprotein (LDL), and total cholesterol concentrations. It may elevate triglyceride concentrations by approximately 15% in some patients.[19] Data on the effect of bisoprolol on carbohydrate metabolism is limited. One small study indicated that two weeks of bisoprolol 10 mg once daily did not significantly change fasting plasma glucose or hemoglobin A_{1c} concentrations in type 2 diabetic patients.[19] In general, metoprolol decreases insulin sensitivity and HDL cholesterol concentration by 21% and 7% respectively; triglyceride concentration is increased by approximately 30%.[18] Most studies have demonstrated that carvedilol has a neutral lipid profile.[20] However some studies have shown carvedilol to either increase or decrease HDL cholesterol concentration by 7.4% and 11% respectively.[20,21] The effect of carvedilol on insulin sensitivity has ranged from a decrease by 10 % to an increase by 13% from baseline sensitivities, suggesting a neutral effect.[18,20]

Pulmonary Effects of Carvedilol, Bisoprolol, and Metoprolol

Nonselective β-adrenoceptor blockers have been shown to exacerbate bronchospasm in patients suffering from reversible obstructive lung disease. Since β_2-receptors are the dominant β-receptor type existing in the bronchi, nonselective β-blockade results in spasm of bronchial smooth muscles.[22] Consequently, due to its nonselective β-blocking effects, carvedilol should not be administered to patients with reversible obstructive lung disease.[23] In theory, since both metoprolol and bisoprolol are β_1-selective adrenoceptor antagonists, minimal bronchoconstriction should occur following administration to asthmatic patients. This observation has not been validated by studies. One study compared single dose effects of bisoprolol 10 mg, bisoprolol 20 mg, and metoprolol 100 mg in asthmatic patients. Peak expiratory flow rates decreased significantly with all three doses. Forced expiratory volume in one second only decreased significantly with bisoprolol 10 mg.[24] Possible reasons for β_1-adrenoceptor antagonist induced bronchospasm include β_1-receptor involvement in bronchodilation and incomplete selectivity of β-adrenoceptor antagonists at higher doses. In contrast, patients with irreversible obstructive lung disease are much less likely to exhibit bronchospasm following β-blockade.[22]

Conclusion

To date, carvedilol is the only β-adrenoceptor antagonist approved for use in the treatment of heart failure. However, the MERIT-HF and CIBIS-II trials were the first trials to demonstrate significant mortality benefits associated with treatment of heart failure patients with β_1-selective adrenoceptor antagonists. Since the three heart failure trials included patients already on angiotensin converting enzyme inhibitors, both β_1-selective and nonselective β-adrenoceptor antagonists appear to confer additional mortality benefits to patients with NYHA class II-III heart failure. Questions regarding the use of β-blockers in NYHA class IV patients and the advantage of multiple receptor blockade over single receptor blockade will be answered by ongoing trials.

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A Surplus of Physicians? The View of Internists at a Single Institution

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ABSTRACT—*Background:* The sizable increase in the United Statess physician workforce over the last 25 years has led to a concern by health policy analysts that we are training too few generalist physicians, too many specialists and too many doctors altogether. Nearly all analysts' studies report that the United States currently has an adequate or more than adequate supply of physicians; however, few reports discuss practicing physicians' view of the issues. *Objective:* To determine internists' opinion regarding the current and future physician supply and specialty mix. *Design:* Analysis of results of a mailed questionnaire. *Setting:* Nine hundred bed academic medical center in southern Connecticut. *Participants:* Three hundred seventy eight internal medicine attendings, fellows and residents. *Measures:* Seventeen questions that covered 4 domains: is there or will there be a surplus of general internists, internal medicine subspecialists or total physicians in Connecticut or the United States; which internal medicine subspecialties have a current surplus; what is the correct primary care/specialty care mix for our physician workforce; and what subspecialties are current internal medicine residents planning to pursue? *Results:* A total of 378 of 686 (55%) mailed surveys were returned. The majority of physicians reported that there is currently no surplus of physicians (68%) or general internists (90%) in the Unites States, but that there is a surplus of internal medicine subspecialists (68%). The majority of the physicians who responded that there is no current surplus reported that there would not be a surplus in 10 years. Subspecialties most frequently indicated to have a surplus in the United States were cardiology (70%) and gastroenterology (57%). A majority of internal medicine residents (66%) indicated that they planned to pursue subspecialty fellowship; the fellowship most commonly indicated was cardiology (23%). *Conclusions*: In contrast to the opinion of most health policy analysts, the majority of internists associated with our institution do not believe that there is or will be a physician surplus in the United States. Reasons for a difference of opinion between practicing internists and health policy analysts are worthy of further study.

Introduction

WHILE debate continues regarding the appropriate specialty mix and geographic distribution of our nation's physician workforce, there is now near-universal agreement among policy bodies, analysts and governmental organizations that there is an adequate, if not excessive supply of physicians in the United States.[1-16] Furthermore, since the supply of physicians continues to grow at a rate faster than that of the U.S. population,[17] the physician per population ratio is increasing.

Since all physicians must complete graduate medical education in the U.S. prior to entering practice, it has been proposed as the control point for limiting the growth of our physician supply. While there has been little national oversight or regulation regarding the size or number of graduate medical education programs, a few of the nation's

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large graduate medical education training programs, such as Partners Healthcare in Boston and Duke University, have attempted highly-publicized campaigns to reduce the size of their graduate medical education programs.[18] Recently, the Balanced Budget Act of 1997 eliminated the financial incentive[22,23] for institutions to increase the size or number of graduate medical education programs.[21] Despite this, the number of residency positions offered in the U.S. has continued to increase,[19] reaching the highest number ever in 1998.[20]

In this light, we hypothesized that the growth in graduate medical education program size and number is due in part to physicians' disagreement with health policy analysts. We suggest that a majority of the faculty, as well as the residents and fellows at teaching hospitals, disagree with the analysts, policy bodies and governmental organizations who have declared that there is or will soon be a physician surplus.

To define more clearly what physicians believe about the state of our nation's physician workforce and its specialty mix, and to understand what impact they may have on actions to influence workforce size or specialty mix, we designed a survey and administered it to the internal medicine faculty, fellows and residents at our institution. We report descriptive results by answering the following questions—In the view of physicians: 1) Is there or will there be a surplus of internists, internal medicine subspecialists or total physicians? 2) Which internal medicine subspecialties have a surplus? 3) What is the correct primary care/specialty care mix for our physician workforce? 4) What subspecialties are current internal medicine residents planning to pursue?

Methods

Setting.—Yale-New Haven Hospital is a 900 bed academic medical center with 68 residency and fellowship training programs, 500 residents and 150 fellows and a medical staff of over 2,000 attending physicians. In southern Connecticut, Yale-New Haven Hospital's service area, less than 10% of payment for physicians' services is traditional fee-for-service; managed care accounts for almost 50%, and the remainder is discounted fee-for-service.

Table 1.—Response rates, by physician group.

Group	Response Rate
Full Time Faculty	76/154 (49%)
Part Time Faculty	156/255 (61%)
Fellows	55/102 (54%)
Residents	91/175 (52%)
Total	378/686 (55%)

Participants.—All members of Yale-New Haven Hospital's current internal medicine staff and house staff were identified though institutional files. We mailed a one page questionnaire, which was color-coded to allow differentiation of fellows, house staff, and full and part time faculty, to all internal medicine physicians. *Full-time* faculty and *part-time* faculty designations were based on Yale University School of Medicine's faculty appointment for each physician; full time faculty members are employees of Yale University School of Medicine while part time faculty are private practitioners with a teaching appointment at the School of Medicine. *Fellows* and *residents* were designated as those physicians enrolled in one of our internal medicine specialty training programs or internal medicine residencies, respectively.

Measurements

Questions (yes/no) asked the physicians if they felt there is a current surplus of all physicians, general internists or internal medicine subspecialists in Connecticut or

Table 2.—Number of responders in each group who believed that there is, or will be, a national surplus of the indicated physician category.

	Total Physicians		Generalist Physicians		Internal Medicine Subspecialists	
Group	Currently No. (%)	In 10 Years No. (%)	Currently No. (%)	In 10 Years No. (%)	Currently No. (%)	In 10 Years No. (%)
Full-time faculty	18/67 (27%)	12/44 (27%)	6/60 (10%)	14/44 (32%)	46/66 (70%)	5/15 (33%)
Part-time faculty	48/127 (38%)	21/68 (31%)	12/115 (10%)	23/88 (26%)	86/117 (74%)	7/20 (35%)
Fellow	7/49 (14%)	43/38 (34%)	2/40 (5%)	11/35 (31%)	19/45 (42%)	4/19 (21%)
Residents	31/81 (38%)	14/46 (30%)	10/72 (14%)	15/57 (26%)	56/75 (75%)	4/16 (25%)
Total	104/324 (32%)	60/206 (29%)	30/287 (10%)	63/224 (28%)	207/303 (68%)	20/70 (29%)

Table 3.—Number of responders in each group who believed that there is, or will be, a surplus in Connecticut of the indicated physician category.

Group	Total Physicians		Generalist Physicians		Internal Medicine Subspecialists	
	Currently No. (%)	In 10 Years No. (%)	Currently No. (%)	In 10 Years No. (%)	Currently No. (%)	In 10 Years No. (%)
Full-time faculty	15/37 (40%)	37/75 (49%)	13/74 (18%)	16/54 (30%)	58/75 (77%)	6/16 (38%)
Part-time faculty	27/60 (45%)	89/153 (58%)	28/152 (18%)	40/108 (37%)	129/153 (84%)	7/20 (35%)
Fellow	8/24 (33%)	31/55 (56%)	10/52 (19%)	15/41 (37%)	43/54 (80%)	3/10 (30%)
Residents	14/43 (33%)	43/87 (49%)	17/89 (19%)	23/67 (34%)	69/89 (78%)	5/17 (29%)
Total	64/164 (39%)	200/370 (54%)	68/367 (19%)	94/270 (35%)	299/371 (81%)	21/63 (33%)

in the U.S. Physicians answering "No" to any of the above were questioned (yes/no) if they felt that there would be a surplus of the relevant physician category in 10 years. Physicians who felt there is a current surplus of internal medicine subspecialists in Connecticut or the U.S. were asked to indicate which of 10 common internal medicine specialties currently has a surplus in Connecticut or in the U.S. Opportunity was given to write in internal medicine specialties not appearing on the list. Resident responders were asked to indicate if they were planning to pursue an internal medicine specialty fellowship, and if so, in which specialty. Finally, the physicians were asked if a 50% primary care, 50% specialty ratio was a correct mix for the physician workforce in Connecticut or in the U.S. Physicians who responded "No" were asked to indicate what they felt is the ideal ratio of primary to specialty care-trained physicians in the U.S.

Returned questionnaires were judged completed if more than 75% of questions were answered.

Results

A total of 378 (55%) of 686 mailed surveys were completed and returned. There was no difference in the response rate between the four physician groups (full-time and part-time faculty, residents and fellows) (Table 1).

The majority (220/324 or 68%) of the physicians felt that there is no physician surplus in the U.S. (Table 2), and less than one third (29%) of this group felt that a physician

Table 4.—Internal medicine subspecialties felt to have a surplus by region, and physician group.

Specialty	Full-time faculty		Part-time faculty		Fellow		Residents		Total	
	Conn. (n=58)	U.S.A. (n=46)	Conn. (n=129)	U.S.A. (n=86)	Conn. (n=43)	U.S.A. (n=19)	Conn. (n=69)	U.S.A. (n=56)	Conn. (n=299)	U.S.A. (n=207)
Cardiology	44 (76%)	31 (67%)	110 (85%)	52 (60%)	32 (74%)	17 (89%)	56 (81%)	45 (80%)	242 (81%)	145 (70%)
Endocrinology	4 (7%)	2 (4%)	8 (6%)	4 (5%)	2 (5%)	0	2 (3%)	2 (4%)	16 (5%)	8 (4%)
Gastroenterology	37 (64%)	29 (63%)	85 (66%)	39 (45%)	25 (58%)	15 (79%)	45 (65%)	36 (64%)	192 (64%)	119 (57%)
Geriatrics	1 (2%)	0	0	0	0	0	0	0	1(<1%)	0
Hematology	1 (2%)	0	0	0	2 (5%)	0	0	0	3 (1%)	0
Infectious disease	2 (3%)	2 (4%)	0	1 (1%)	3 (7%)	0	2 (3%)	1 (2%)	7 (2%)	4 (2%)
Nephrology	5 (9%)	3 (7%)	2 (2%)	2 (2%)	2 (5%)	1 (5%)	2 (3%)	2 (4%)	11 (4%)	6 (3%)
Oncology	4 (7%)	0	5 (4%)	0	2 (5%)	0	0	0	11 (4%)	0
Pulmonology	6 (10%)	4 (9%)	5 (4%)	2 (2%)	5 (12%)	3 (16%)	10 (14%)	8 (14%)	26 (9%)	17 (8%)
Rheumatology	1 (2%)	2 (4%)	3 (2%)	0	0	0	0	0	4 (1%)	2 (1%)
Other*	4 (7%)	4 (9%)	8 (6%)	5 (6%)	2 (5%)	1 (5%)	2 (3%)	0	16 (5%)	5 (2%)

*Responses were "all subspecialties" or "almost all subspecialties"

Table 5.—Number of responders who believed that a 50/50 primary care/specialty ratio is the proper physician specialty mix for the indicated region.

Group	Connecticut No. (%)	U.S.A. No. (%)
Full-time faculty	43/62 (69%)	34/55 (62%)
Part-time faculty	81/140 (58%)	68/124 (55%)
Fellow	28/52 (54%)	22/43 (51%)
Residents	53/87 (61%)	44/77 (57%)
Total	205/341 (60%)	168/299 (56%)

surplus will develop in the next 10 years. Most physicians (90%) also agreed that there is no surplus of general internists in the U.S., and of this group fewer than one third (28%) believed a surplus will develop in 10 years. The majority of physicians (68%), however, did agree that there is a surplus of internal medicine subspecialists in the U.S. and subspecialties most frequently indicated were (Table 4) cardiology (70%), gastroenterology (57%), pulmonology (8%), nephrology (3%), infectious disease (2%), and oncology and rheumatology (1%).

In contrast to our findings regarding the presence of a physician surplus in the U.S., we found that the majority of physicians (54%) did in fact think that there is a surplus of physicians in Connecticut (Table 3). However, most physicians (82%) indicated that there is no current surplus of general internists in Connecticut.

Slightly more than half of responders (56%) considered a 50%/50% primary care/specialty physician ratio appropriate for the U.S. (Table 5). An average appropriate ratio suggested by dissenters was 66/34.

Fellows led all groups in indicating there is no overall physician surplus or surplus of general internists in the U.S. (86% and 95%, respectively), followed by full time faculty (73% and 90%), part time faculty (62% and 89.6%), and, finally, residents (62% and 86%). Fellows most often responded that there is no surplus of IM subspecialists in the U.S. (58%), followed by full time faculty (30%), part time faculty (27%) and residents (25%).

A majority (56/85 or 66%) of residents reported plans to pursue a subspecialty fellowship; cardiology (23%) was the specialty most commonly selected, followed by oncology (13%) and pulmonology (11%) (Table 6).

Table 6.—Specialty distribution for residents intending to pursue fellowship.

Subspecialty	Number (percent) indicating
Cardiology	13/56 (23%)
Endocrinology	2/56 (4%)
Gastroenterology	4/56 (7%)
Geriatrics	4/56 (7%)
Hematology	2/56 (4%)
Infectious Disease	3/56 (5%)
Nephrology	3/56 (5%)
Oncology	7/56 (13%)
Pulmonology	6/56 (11%)
Rheumatology	1/56 (2%)
Other IM	6/56 (11%)
non-IM	2/56 (4%)
Unsure of subspecialty	3/56 (5%)

Discussion

These findings illustrate the dichotomy between the opinion of policy bodies, analysts and governmental organizations, who are largely in agreement over the adequacy of the current physician supply, and the opinion of physicians practicing at a large northeastern academic medical center.[1–16]

Based on Health Maintenence Organization staffing requirements, a popular method of estimating physician need,[2–4] a physician to population ratio in the range of 110–150 physicians per 100,000 patients has been estimated to be adequate to meet present U.S. needs. Currently, it is estimated that the U.S. has slightly more than 180 physicians per 100,000 patients and that the primary care/specialist ratio of these physicians is 34/66.[17] Connecticut has a physician to population ratio of 241—more than twice the estimated need for the U.S. and the fifth highest ratio of any state in the U.S. New Haven county's physician to population ratio is even greater at approximately 261.[17] The physicians in this study all lived and worked in this highly physician-penetrated region. Perhaps not surprisingly, the physicians questioned felt that Connecticut has too many physicians; however, the majority of them also responded that there is no current or impending surplus of physicians in the U.S.

The difference in these responses may be due to a comparison of physician/population ratios of Connecticut to that in the whole of the U.S.—a type of downward comparison—or may represent an informed opinion about the size of our state and national physician workforce and an accurate estimation by physicians of the current and future physician need. The point, however, is moot. Unless current trends are reversed, we will have almost 210 physicians per 100,000 population in practice within 10 years—a number clearly in excess of what any author has proposed as an appropriate ratio and close to the current Connecticut ratio.[24] Yet despite this growth trend, we found that only 50% of physicians felt that there will be a physician surplus in the U.S. in 10 years. Any initiative to reduce the size of the physician workforce or to change its specialty composition will need the support of physicians—particularly those physicians at academic medical centers who are involved in recruiting and training students, residents and fellows—in order to succeed. We conclude that the majority of physicians in this study do not agree with the health policy analysts' conclusion that there are or will soon be too many physicians in the U.S., and therefore may not support national initiatives aimed at changing the physician workforce. Further study into the reasons behind the physicians' disagreement with health policy analysts over workforce issues is indicated.

Physician opinion regarding specialty mix and the appropriate ratio of generalists to specialists is a more complex matter. Physicians were in broad agreement that there is not, and will not be (in 10 years), a surplus of general internists, and that there presently is a surplus of internal medicine subspecialists. This opinion is also reflected in the primary care/specialist physician ratio indicated as appropriate by physicians (Table 5). It appears that the physicians, while disagreeing with predictions regarding an overall physician surplus, agree that the specialty mix is inappropriate for national needs and that it consists of too large a percentage of specialists.

The Internal Medicine specialties most frequently noted to have a surplus, both in Connecticut and the U.S. were cardiology and gastroenterology. Despite this agreement, 23% of fellowship-bound residents plan on training in cardiology (Table 6)—even though 80% of these same residents indicated that there was a current surplus of cardiologists in the U.S. Perhaps the training plans of physicians are not significantly determined by physician workforce predictions-even when the physicians agree with the predictions. This suggests that market forces may fail to have an impact on physician number, specialty choice and practice location.

Fellows were more than 20% more likely to indicate that there was no physician surplus or, for the U.S., a surplus of internal medicine subspecialists, than the other physician groups. This result may represent a bias since all fellows, by definition, have chosen subspecialty training. Another possibility is that their frame of reference is different from the other physician groups. At our institution, 74/181 (41%) of our fellows are international medical graduates as compared to 93/448 (21%) of our residents, and a smaller percentage of our full time and part time faculty. International medical graduates, frequently from countries with very high physician to population ratios and with under-employed or unemployed physicians, may view our physician to patient population as comparatively low.

Our study has several limitations. First, it is unclear whether these results are generalizable to the rest of the US, or if our physician opinions are representative of physicians in other regions of the nation. Our physicians practice in a heavily physician-penetrated region and are all staff members at a large academic medical center. Therefore, the physicians in our report may view other areas of the U.S., particularly those with a smaller physician/population ratio, as without a physician surplus. Physicians from regions of lower physician/population ratio or with an increased penetrance of managed care may likewise view their ratio as too high and ours as excessive. However, many of the physicians in our study completed training and/or practiced in other regions of the nation and therefore should be able to provide an informed opinion on the appropriateness of Connecticut's physician workforce in relation to the rest of the nation. Second, our survey was designed only to evaluate general attitudes but not to investigate them in depth. The questionnaire, therefore, may not have been specific enough in some areas to allow physicians to fully explain their positions, or the reasoning behind their positions. Third, our response rate was only 55% and due to the anonymous nature of the survey, we were unable to determine the physician characteristics of the responders as compared to the nonresponders.

Despite the limitations, our study provides evidence that most internal medicine physicians at our medical center disagree with the thesis that there is a current or impending physician surplus in the U.S., agree that there are too may subspecialists (particularly cardiologists and gastroenterologists) and too few generalists, and agree that the physician workforce mix should be at least 50/50 generalist/specialist. Our study also provides evidence that resident physicians' specialty choices are not influenced by a perception of specific areas of specialty surplus.

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Commentary

Goodbye Osler, So Long Aristotle, Hello Quantum Physics!

Dr. Massey's theme in "One Hundred Fifty Years Later," (*Conn Med* 1999; 63:499), strikes a melancholy chord with all who fondly recall the old ways of liberal education, including those physicians who are disturbed by the current fragmentation of knowledge. As Dr. Massey put it: "Add a philosopher or English professor under 40 to the crowd (at an academic cocktail party) and everyone either shuts up or goes for a third martini." Mutisms or martinis have a certain logic, an either/or, a binary fit for our digital computerized society. It's all a matter of numbers. Either silence or the loosened tongue of a third martini, three-flavored quarks, a triplicate fit to the bizarre world of quantum physics. Quarks are social, never isolated. They come to atomic cocktail parties in threes, strange, charming, and upbeat by definition. After the third martini we begin to envision our three virtual quarks as real, building an atomic nucleus bound by the strong force, a tiny proton pea in an atom the size of Carnegie Hall. Cocktail parties with academics invite odd thoughts.

The fragmentation of human knowledge has been going on for a rather long time, much more obvious today as we are relentlessly bombarded by "experts" in every field, the "two-hundred dollar heads" that flit like electrons across our TV screens. Like physicists we should begin with the "Big Bang" of Western civilization in ancient Greece, a hundred generations ago, about 500 B.C. Or maybe even deeper into the unknown, back to the 8th- or 9th-century B.C. to the Bible of the Greeks, Homer's *Iliad* and *Odyssey*: "Tell me, O Muse, th' Adventures of the Man."[1] No one knows if Homer was a real person. His epics describe the clash between Greeks and Trojans many centuries earlier. Greeks in the illiterate age of Homer were in the devilish habit of blinding their poets, to preserve their memory of the tribe, and to prevent their escape. Homer was a blind poet, inspired by gods, to verbally transmit the glories of Achilles and Ulysses. No one knows how Homer came by his knowledge of the deep past, centuries before history was written. "Enthusiasmos" was the Greek word for living life to the full, when gods controlled all Nature. The Greeks worshipped life, the Egyptians death. The whole world was a huge living organism to the early Greeks, and man was an integral part of purposeful Nature, not marooned in a meaningless universe from which the gods had long since disappeared.

The earliest Greeks down to Hippocrates, a contemporary of Socrates in the 5th century B.C., made the Greek word "diagnosis" mean not only the correct disease but also the right treatment and prognosis. Democritus, the physician-physicist teacher of Hippocrates, invented atomic theory. His *atomoi* were indivisible tiny particles. Modern quantum physicists have splintered the indivisible Greek atom into quanta more numerous than the elements in the periodic table.

"All things are number," said Pythagoras in the 6th-century B.C., demonstrating the mathematical beauty of "cosmos," the opposite of "chaos." Pythagoras coined the word "philosophia" to mean the adoration of all wisdom, not like the modern analytic philosopher strictly confined to the narrow domain of symbolic syntactical forms.

Aristotle, who invented logic, the science of inference, had encylopedic knowledge of the full range of sciences, philosophy, and history of the ancient world. No Aristotles walk the earth in our fragmented modern Age of Information. There is too much knowledge to master. We look at the world through myopic eyes. We no longer see the broad horizons.

The ancient Greek word for soul, "psyche," meant only the principle of life, life-force, without religious connotations of immortality. Psyche was a beautiful Greek goddess, and people left the temple of Aphrodite to worship her. Plato, the pupil of Socrates and mentor of Aristotle, considered *ideai* not as discrete ideas in the human head but rather as universals, eternal general truths built into all Nature. The meanings of the original Greek words not only changed with the centuries, but also their new meanings have less general application. Diagnosis, atom, philosophy, soul, and idea are examples. The words themselves have become fragmented.

Aristotle divided all he saw into genus and species, into categories and causes, into the separate divisions of science and philosophy at his Lyceum. Aristotle was the last man with real knowledge of all the separated fragments. The continuity of all knowledge was destroyed. The real connections between all the Greek islands under the Aegean Sea suddenly became invisible. Modern man stands on the shore while the original Greeks climbed their mountains, from which the connections between the islands of knowledge is plainly visible through the clear water, refracted in the bright light of the Greek sun. Aristotle taught Alexander the Great, whose conquest of the Orient, extending to Egypt, Persia, and India, has never been equalled. The known world became immediately and vastly larger, as a result of his conquest. He established 50 new Alexandrias, from Egypt to India, and ended Aristotle's concept of the individual city-state, fusing all into a new Pan-Greek-Oriental Empire. Aristotle considered non-Greeks barbarians, while Alexander and his generals took Oriental wives, breaking their ties with the old Macedonian culture.

In a similar way Galileo established modern science in the 17th century. With his telescope Galileo expanded the known universe a hundred-thousandfold. Our earth suddenly became a very small fragment floating in a vast cosmic ocean. At one stroke human knowledge expanded, while individual human existence was reduced to a brief interval on a minor planet. Galileo, Kepler, Descartes, and Newton established the new age of science on verifiable principles of accurate measurement. Kepler showed the geometric laws of elliptical planetary movement. Descartes translated geometry into algebraic equations. Newton made it clear, using the old geometry of Euclid the Greek, that the laws of Nature apply to the fall of an apple and to the fall of the moon, to the motion of planets, and the passage of stars. Mathematics is the language of physics: numbers are its alphabet.

Dr. Massey says, "Who wants to deconstruct Tolstoy or hear that scientific fact is only a cultural construct?" Isaac Newton was an aberration, by no means a typical cultural specimen, but rather a unique, isolated, nearly antisocial genius, centuries ahead of his time. Verifiable scientific truth cannot be equated with all the belief systems created by various cultures, from Mesmerism to Mumbo-Jumbo. Those who maintain that "scientific fact is only a cultural construct" are not those who actually do science. Science is concerned only with observation, inference, and calculation. Original science is largely indifferent to the particular culture in which the scientist works. Osler, Helmholtz, Claude Bernard, Darwin, and Bohr, scientists mentioned by Dr. Massey, possessed a reverence for scientific fact that is irreducible to their several cultural perspectives.

Deconstructing Tolstoy and Shakespeare eliminates the passion of Tolstoy and Shakespeare, an integral part of the myopic reductionism of modern life. They deconstruct bloodless logical abstractions, not living originals played out on battlefields and theatrical stages. We kill in order to dissect. In the face of contemporary fragmentation we struggle to understand what we cannot see, standing like soldiers on the smoking battlefield of the 20th century. How can we detect the simple truths that lie beneath all the diverse complexities? How do we get through all the rubble? The human genome, a hundred thousand genes, is reduced to combinations of only four bases (nucleic acids), an alphabet with only four letters. Our Internet, a vast compendium of information, is contained in digital computers of ones and zeros, an instantaneous binary that reduces all its archives to an alphabet of only two. Our logic, by the law of noncontradiction, holds that a statement and its negation cannot both be true, another alphabet with only two letters, true and false. Even the neurons of our brains obey the "all-or-none" law!

Paradoxically we are saved from all this reductionism by quantum physics, the most exact and final form of physics, the ultimate science. Quantum physics builds uncertainty into all science, from the bottom up. Matter is created, all the time, out of energy, in the frothy "quantum vacuum" which spreads across the cosmos. The equations of quantum physics work in both directions: antimatter moves back in time, matter forward. Photons, quanta of light, moving at the speed limit of the universe, 300,000 kilometers per second, do not "know" the passage of time. Time stops at lightspeed. Quantum mechanics, the science of multidimensional fields of leptons and quarks that cannot be seen or touched, fields of force in which we are enmeshed, breaks all the old and cherished bonds of common sense. We live at the dawn of a new way to think about human existence. The observer is central to quantum determinations. We know quanta only indirectly, by their effects, which we call light, electricity, heat, sound, motion, mass, matter, etc. We, the human observers, are integral living parts of the final quantum uncertainty built into all Nature, creatures of the gods, not "cultural constructs."

Were Osler to return today, as proposed by Dr. Massey, perhaps he might revise his famous Classical Association Address, given at Oxford in 1919: "The Old Humanities and the New Science." Osler was a genius for looking backward into history, while keeping a sharp eye on our future. I suspect old Osler might be curious, and want to know how things turn out....

Charles W. Needham, M.D.
Norwalk

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50 Years Ago

From *The Connecticut State Medical Journal*

December 1949

The Relationship of the General Practitioner to the Hospital Staff

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THE medical profession in its endeavor to supply the best medical care possible for the public finds itself in a panorama of chaotic changes never before known in its long and glorious existence. Some of these changes are good and denote progress, others are not good and denote retrogression. Complete cooperation of the profession as a whole is vitally necessary if we are to protect a free enterprise, one of which will and can serve the public so that all persons may have adequate care.

However, we have a problem within the profession which is of a serious nature and which is not smiled upon by the consumer public. This is the relationship of the man in general practice to the hospitals and their staffs. This relationship should be one of cooperation, sincerity of purpose, and integration into the staff and modus operandi of the hospital. The man doing general practice is an essential factor in keeping the hospital census at a high level, either by his own admissions or by those he has referred for specialized services. He should, therefore, be an integral part of and have a voice in the procedures and services of that hospital which administers services to his patients. However, during the past 15 or 20 years, and especially after World War I and World War II, this relationship has in many communities become so strained that it has resulted in a cleavage and regimentation with often an antagonism of personalities. This condition should not exist within the medical profession and the sooner it is corrected the farther away from bureaucratic control we will be.

What are some of the important factors which have had a part in producing this condition?

1. *Distribution of Medical Care.*—For many years the medical profession, as well as the public and the government, has been concerned with methods of improving the distribution of medical care. There are many factors involved in this problem, but one of the main factors is the need for more well trained general practitioners.

As of June 1, 1948, the Bureau of Medical Economic Research of the American Medical Association estimated that there were 199,755 physicians in the United States. In 1940 there 175,163 physicians. This is an increase of approximately 14 per cent in the number of physicians during an eight year period and in that same period the population has increased only 12 per cent. There is on the average about one doctor to every 735 persons. However, some of these doctors are not in active practice and the correct average is about 1 to 1,000. This proportion is adequate and would be a healthy situation if distribution were equitable but the largest medical population is congregated in cities and urban centers leaving the rural areas without sufficient care. This must be corrected and many plans are being tried in order to solve this problem.

The public needs and wants the services of a family physician who can care for the majority of their ailments and who will assist them in obtaining specialized services

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when they are needed. Most of the people would like to have a family doctor located in their immediate community, one who will be available and interested when they feel they need medical attention. However, on occasions he or his family needs to have the benefit of specialized knowledge or skills. Technical advancements in medicine in the last fifty years, while developing special branches of medicine, have at the same time increased the value of the services general practitioners can render and made even more indispensable the role they occupy in the health of the individual. Meanwhile, the hospital by centralizing in one institution the physical facilities and technical aids required in modern medicine has become an important element in medical practice.

2. *Insufficient Hospital Facilities and the General Practitioner.*—In many areas there are few or no hospital facilities and this is detrimental to both patient and doctor. In the larger cities and in many urban centers the public has become hospital conscious especially since the advent of hospitalization insurance. Many minor operations are being done in the hospital which previously were performed in the office. The Hill-Burton Act will help small communities improve this situation. In many large hospitals in the cities there has been much discrimination against the man in general practice and his patients. The sooner this is corrected, the more solid will become the bulwark against socialized medicine. The man in general practice is the backbone of medicine and he does 85 to 90 per cent of all the work for the public. The Lee-Jones study showed that a properly qualified general practitioner could adequately care for 91 per cent of all cases of illness, excluding refractions.

Hospital authorities are concerned with maintaining the quality of medical care provided in their hospitals. The medical staffs of the hospitals have initiated and encouraged that objective, but as hospitals grew in size and complexity, the responsibility for maintaining the hospital's main purposes was shifted to full time hospital administrators. The medical staff, to some extent, lost its interest and control of its own function in the hospital.

The hospital administrator needed standards to measure the training and ability of physicians desiring staff privileges. The American College of Surgeons and later other specialist societies and the American Boards met this need by setting up certain standards of training for membership in their organizations. This resulted in a trend to select physicians for staff privileges on the basis of certification in a specialty or membership in a specialist society. Hospital authorities cannot be blamed for using standards formulated by the medical profession. Another factor that contributed to limiting staff privileges was the need for hospitals to be organized into departments as they grew in size. In this respect, hospitals were following sound organization principles. Effective operation and control of any organization requires a breakdown according to some logical order. In hospitals it is natural to have this breakdown according to type of services.

In many hospitals organization and standards of training in a special branch of medicine become more important than providing facilities and technical aids for the physicians rendering the bulk of the services outside the hospital. This situation grew worse during the recent war and immediately after, when all hospitals were overcrowded. Some hospitals hesitated to add physicians to the hospital staff when they could not handle the patients of their present staff. Some physicians located a long distance from a hospital who were so busy with office and home calls were satisfied to turn the cases needing hospitalization over to staff physicians.

It soon became apparent that the public needed more well trained general practitioners but that medical students trained in large medical centers and in highly departmentalized hospitals were not interested nor prepared to enter general practice. In 1945 the House of Delegates of the American Medical Association established a section on general practice and in 1946 adopted a resolution designed to encourage hospitals to provide a general practice section in hospitals. It stated that the criterion of whether a physician may be a member of the hospital staff should not be dependent on certification by the various specialty boards or membership in specialist societies.

The American Medical Association in 1947 reaffirmed their recommendations for general practice sections in hospitals. The Advisory Board for Medical Specialties concurred in the American Medical Association's statements that membership on hospital staffs should not be dependent on certification by a specialty board or membership in a specialist society. Hospital staff appointments should depend on the qualifications of individual physicians to render proper care to hospitalized patients as determined by the professional staff of the hospital.

3. *Over-specialization.*—There has been a trend during the past few years to encourage every student entering medical school either in his premedical years or on his entrance to medical college to plan for a specialty. If this continues to a point where every doctor is a specialist the public will suffer and the cost of medical care will be unnecessarily increased. What has caused this trend? Is it a post war movement which was influenced by the armed services? Is it caused by medical schools and teaching hospitals not offering a curriculum to train men to go into general practice? Is it due to discriminations against a person who wants to go into general practice to such an extent that he feels that he must become a specialist in order to get the necessary facilities for his patients? There

are at present 199,755 doctors in these United States and about 42,300 are specialists in some line, full or part-time specialists, and of these about 29,000 are certified by the various boards. The proportion is about 1 specialist to every 4 general men. This would be more equitable if it were 1 to every 6 or 8. The public would get medical care at less expense and fewer patients would be patronizing chiropractors, naturopaths, osteopaths, and the other faddists.

Specialization should have as one of its requirements at least five, and preferably ten years in general practice. In some communities which are overspecialized, the public complain that they cannot get a doctor to make a house call. This is not a healthy situation for the medical profession.

Many discouragements have been placed before the young man who desires to go into general practice. The present trend in education for the medical student is a preparatory course for board certification. The hospital internship is a step toward a board residency and does not give the student who is going into general practice the desired training. More universities should follow the plan of the universities of Colorado, Louisiana, Kansas, Missouri, Indiana, Kentucky, and many others, and establish a residency in general practice. All hospitals should have sections on general practice and the residency should provide graduate instruction in the various specialties. Many hospital staffs are so over specialized that the staff appointments are discriminatory and the man who has started in general practice is denied staff appointments although his training, diagnostic and therapeutic ability are often above that of the appointee. Finances often mold the educational course of an individual and over-education does not always make the most successful physician. The young student today who plans to go into general medicine needs encouragement from medical colleges, hospitals, medical organizations, communities, associates, and the public, if he is to fulfill his duty to the country as a whole.

The failure of medical schools to recognize the fact that all students of medicine cannot become specialists, and their failure, as well as hospitals, to train men who will be expected to do general practice and take care of 85 per cent of the public's medical problems has also had its influence on depleting the number of general men. There has been disregard for the rural areas, which are now demanding adequate care. If we do not supply it voluntarily, then the government will. More good general physicians and fewer specialists must be trained if we as a medical profession expect to remain free to practice medicine as a free enterprise, and have the public's support. Rural areas must have adequate medical service, and this can only be given by the general practitioners.

These various discriminations and regimented ideas have had a powerful influence on 130,000 doctors who are doing general practice. What could be done to change this trend of affairs? The American Medical Association, the policy making body of medicine, had sensed this trend and had created a section on general practice as a component part of that organization in 1945. However well attended as this new section was, it was not the answer. The men doing general practice wanted their own organization, an organization which would represent them as a unit body, as did the American College of Surgeons represent their members. Many of the problems which concerned the individual general doctor could best be handled by a concerted and well organized action. This had been realized for some time and on July 4, 1946, at a meeting of the American Medical Association's section on general practice in San Francisco, a resolution was introduced from the floor requesting the newly elected chairman to appoint a committee to formulate a national organization for the general practitioners of the United States.

In 1947 the American Academy of General Practice was formed. Its objectives are primarily to raise the standards of education for general practice training, to encourage and assist young men and women in preparing, qualifying and establishing themselves in general practice and to preserve the right of the general practitioner to engage in medical and surgical procedures for which he is qualified by training and experience.

The American Academy of General Practice provided the general practitioners with their own organization to assist and cooperate with other medical and hospital organizations in providing better medical services. It now has constituent chapters in 44 of the states and the District of Columbia, and its total membership is approaching 15,000.

The Committee on Hospitals of the American Academy of General Practice drew up a report which contained a suggested plan for establishing a general practice section in hospital staff organizations. The Committee pointed out that such sections are not necessary or desirable in all hospitals. During the annual meeting of the American Academy of General Practice in March 1949 the Committee on Hospitals presented a new and revised report. This report contains principles on general practice sections and provides a specific plan for integrating a section on general practice in a hospital staff organization. The plan is designed for easy adoption to existing by-laws. The proposed general practice section fits in with the organizational plan recommended by the American College of Surgeons. Since most hospitals follow the functional organization of the American College of Surgeons, the addition of a general practice section will not disturb or change the existing structure.

The basic principle of the Academy's recommendations is that all physicians desiring staff privileges shall be screened by a Qualifications and Credentials Committee. This committee is made up of the heads of the various services or departments and it shall determine privileges for all staff members on the basis of training and demonstrated ability. Advancement in privileges or continued membership on the staff shall also be determined by this committee after studying the record of the physician's performance in the hospital.

Under an arrangement as suggested above, both specialists and general practitioners are permitted to do what they are qualified to do as determined by a committee made up of physicians familiar with their work. General practitioners as well as specialists will be working together to keep up with new developments. The patients will benefit by receiving better care from their family physician. Most patients will benefit by having their family physician in attendance when they are hospitalized for a serious illness or operation, even though they are under the care of a specialist. A proper working arrangement in the hospital should encourage the general practitioner to call upon a specialist for consultation and assistance in difficult cases.

Figures are not available for the years 1948 and 1949, but we know that many hospitals have revised their bylaws to include general practice sections during that period. The headquarters office of the Academy of General Practice has received, on the average, correspondence from one hospital a day requesting information on how to establish a general practice section.

The May 7 issue of the *Journal of the American Medical Association* contained the annual statistical report on hospital services in the United States for the year, 1948. The data is collected annually by the Council on Medical Education and Hospitals of the American Medical Association. Included in this report was a summary of data on general practice sections in hospitals. The Council included in their annual census report for the year 1947 the following questions: "In the organization of the medical staff, has the hospital established a general practice section?" Of the 4,539 general hospitals registered, 837 answered yes, 2,521 said no, and 1,181 did not reply to this question.

The majority of the hospitals that reported such sections were operated by churches or non profit organizations. Classified by bed capacity, these hospitals were distributed as follows:

15 beds or less	40
16–25 beds	101
26–50 beds	171
51–100 beds	198
101–200 beds	190
201–300 beds	85
Over 300 beds	52
Total hospitals	837

Although most of the hospitals with general practice sections in 1947 were medium sized, both very large and very small hospitals are included. It is apparent that size in no way precludes a general practice section.

"The Essentials of a Registered Hospital," prepared by the AMA Council, were revised in 1947 to give further encouragement in this matter. The main revision in regard to general practice sections was under the standards for medical staffs. The sixth essential was changed to read: "Departmental sections, such as in medicine, obstetrics, surgery, general practice, etc., should be organized as may be indicated." According to the report there has been an increase in number of hospitals that established general practice sections in recent years, and at present only 11 per cent exclude general practitioners from staff appointment.

As stated earlier, one of the objectives of the Academy is to develop better training programs for general practice. The Academy's Committee on Education is working on various projects for improving both undergraduate and graduate education for general practice. This includes better indoctrination of the medical student in the functions of a general practitioner, preceptor training in the science and art of general practice and postgraduate courses to keep up with medical advancement. Another important type of training is residencies in general practice.

The Council on Medical Education and Hospitals of the American Medical Association has stated repeatedly that establishment of a general practice section in hospitals in no way prevents approval of the hospital for intern and resident training. The Council has gone on to encourage all hospitals, including smaller community hospitals, to set up programs for training of general practitioners. At the Interim Session of the House of Delegates of the American Medical Association in December 1948 the Council submitted its revised "Essentials of Approved Internships, Residencies and Fellowships," which was adopted. The "Essentials" included a new section outlining the standards for approved residencies in general practice, as follows:

"It is recommended that this training be of two years' duration beyond the internship. General practice residencies should be flexible, both as to content and duration, depending upon the special needs of the individual and the community in which he intends to practice. In a residency of two years of training, a minimum of one year should be devoted to internal medicine and the medical specialties, including psychiatry. The second year should include advanced training in obstetrics and pediatrics (including contagious diseases) of at least four months' duration in each specialty. Time devoted to general surgery and the surgical specialties should emphasize diagnosis, emergency care, preoperative and postoperative care, minor surgery and emergency care. A program in which the majority of the residents' time is spent in the operating rooms cannot be considered as meeting the requirements of this type of residency."

The May 14, 1949 issue of the *Journal of the American Medical Association* contains the Council on Medical Education and Hospitals report on approved internships and residencies for 1949. There were 1,187 hospitals with 17,293 residencies and fellowships, as of May 1949. Eighty-five of these hospitals had 216 general residencies. After this year these latter hospitals will have to qualify under the new general practice residency program adopted by the house of Delegates in St. Louis in December 948.

In its report, the Council states that in revising its "Essentials of Approved Residencies and Fellowships" to include standards for a specific residency designed for physicians who intend to enter general practice, it was meeting a demand for such training. It further states that on completion of a residency of this type, the physician should be better prepared to meet the professional demands of the community in his role as "family doctor."

In some areas, community hospitals located throughout the state are used in residency training programs for general practice. The University of Colorado Medical Center has twenty-two general practice residencies. Various hospitals in the state are cooperating with the medical center in providing resident training. The entire program is integrated in the medical centers' educational program. The University of Minnesota operates a similar program. Wisconsin has just announced a two year residency in general practice, and Yale has begun a preceptorship in general practice.

Some years ago, the Council of Rochester Regional Hospitals of New York developed a program for increasing the participation of general practitioners in hospital staffs' work. Its chief purpose is to provide staff privileges for general practitioners and to provide continuous clinical training for general practitioners. The program is directed by a small committee of two representatives of the general practice group and the assistant medical director of the Rochester (N.Y.) General Hospital. A continuous educational program is conducted in all the hospitals for the general practitioner. The programs are developed around ward rounds, attendance at outpatient clinics, work in the x-ray and pathology departments, and regular staff conferences under the chiefs of service or senior attending physicians.

I am happy to say that practically all national and specialty organizations are cooperating with the AMA and the American Academy of General Practice in the problem of readjusting the present and past trends and discriminations that have developed within the profession. Each and every one is working for a better understanding of their individual problems. When this cooperation is complete, the public will have adequate medical care which will be second to none, and there will be no need for governmental control of medicine. In conclusion may I restate that the relationship of the general practitioner to the hospital and staff should be one of cooperation, sincerity of purpose, and his integration into the "modus operandi" of the hospital and staff.

It was said by Osler that "the public bases its estimate of the medical profession on its opinion of the family physician, who is the yardstick by which medical care is measured. By elevating the status and dignity of the general practitioner, we elevate the status and dignity of American medicine as a whole."

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FROM THE EDITOR'S DESK

Millennial Meanderings

The December 1999 issue of *Connecticut Medicine* marks the conclusion of the first year for this editor who assumed the mantle from his erudite predecessor. If this were not sufficient grounds for momentary reflection, then the awe-inducing turn into the third millennium should serve as just occasion to contemplate the scientific/literary microcosm of our journal, and the health-care/society macrocosm within which it rests.

Connecticut Medicine has drawn quality scientific papers from its readership in 1999. Students and residents have actively been engaged. There have been lively commentaries and communications. Clearly, the editor's nightmare—"the invitations went out but no one came to the party"—didn't occur. Scientific material makes up about one third of each issue while the balance is devoted to special articles, commentaries, letters, book reviews, and statements from our publisher, the Connecticut State Medical Society. There were three special issues during the year: a breast cancer symposium in January, a heartfelt festschrift to Dr. Massey in April, and an issue on Sports Medicine in November. Guest editors for the January and November issues were particularly adept at securing and editing the informative material from their committed authors. Kudos again to the team of Drs. Andrea Silber and Scott Kurtzman, and to Dr. Norman Zlotsky.

Looking ahead to the goals for *Connecticut Medicine* as the new millennium opens, members of the editorial board met for a brainstorming session in late September. Were Alexander Pope (1688–1744) there to supply added wisdom to the minutes, he might have recorded, "Be not the first by whom the new are tried, nor yet the last to lay the old aside." There was encouragement for the continuation of the special issue concept, perhaps two or three per year. An ethics symposium and one on mental health are in the planning stage, and a third, focusing on medical history or education is at the "just do it" stage. Future possibilities were suggested including Diabetes, Infectious Disease/HIV, Genetics, and Medicine in the 21st-century, and another Cancer Symposium. Other ideas, along with the raised hands of interested guest editors, are sought. Board members also encouraged the publication of "lighter fare"—fiction, humor, satire, poetry, photography, respectful practice vignettes—to buffer the acid of disruptive change in medical practice in the epoch of "managed care." Jonathan D. Katz, M.D, a New Haven anesthesiologist, was asked to serve on the editoial board, reestablishing representation of that discipline amongst the editors.

Beyond Y2K anxieties and millennial celebrations, *Connecticut Medicine* must continue to serve as an organ of reasoned and credible communication for the medical society, its practitioners, contributors, and readers, and for the ultimate benefit of our patients on entering the next century. A "wish list" designed to reach an ideal health-care environment in that century will be lengthy indeed. One would hope that it will include:

- Understanding amidst diversity, from the medical scene to the global scene.
- Refinement of cooperative multidisciplinary approaches to the care of the sick, readily conveying key information while honoring confidentiality.
- Development of evidence-based but clinically relevant medicine, providing flexible guidelines that do not negate physician judgement.
- Enhanced recognition of the mystery and burden of suffering and a willingness to apply all potential avenues of relief.
- Recognition that the almost insatiable quest for data does not, of itself, make people, or keep people well. Let the web provide information—let the doctor(s) synthesize and assimilate it, with the patient viewed in context, and provide counsel and guidance.
- Strive to humanely incorporate the clinical derivations of the Human Genome Project into patient care, enhancing health while preserving autonomy, confidentiality, and the rule of beneficence.
- Resist the deterioration of physician morale by every means possible, vowing to present to the world a demeanor that will encourage careers in the health professions.

All of this in a stressful time calls for the long view, the image of the slow pendulum swing, the concept of readiness for change rather than alarm at its appearance. We are professionals, still honored, but more dependent upon one another than ever before. Let the journal serve as our statewide organ of communication as we value our interdependence. Remember that the oft-quoted John Donne (1573–1631) stanza that idealizes our interrelationships is still an apt articulation after 375 years.

> No man is an island, entire of itself; every man is a piece of the continent, a part of the main; if a clod be washed away by the sea, Europe is the less, as well as if a promontory were, as well as if a manor of thy friends or of thine own were; any man's death diminishes me because I am involved in mankind; and therefore never send to know for whom the bell tolls; it tolls for thee.

H. David Crombie, M.D.
Editor

Aetna is playing doctor with our patients.

Doctors whose patients are covered by Aetna/US Healthcare must treat them the cheapest way. That's what Aetna's contract requires—"the least costly" alternative.

Sometimes, that's fine. But sometimes another treatment would be better. Or have fewer side effects. But we can't use it.

Same thing when it comes to access to specialists and hospital care. We'd like to be able to send you for treatment whenever we judge it necessary, without fear of being punished by Aetna. That's why doctors go to medical school.

Ironically, we can't even be sure the guidelines of our agreement with Aetna won't be changed right under our feet. Aetna can do that —without asking us—without asking you.

Why should you care? Because it can limit your treatment options. What's acceptable this month may not be the next.

We'd like to work with Aetna and other health insurers to work out our differences. After all, quality patient care should be a vital issue to everyone.

But just as vital is how to improve the health care system on all fronts so it works better for everyone.

We believe the answer lies in one simple question.

It's a question that can quickly bring focus to the debate. It can establish common ground. And be an invaluable guide in designing effective new proposals, be they local, corporate, or national.

Conclusion? Whenever health care is the issue, this should be the only real question: **Is it good medicine?**

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Find out what physicians of the CSMS and AMA say on issues important to you and your doctor at www.csms.org and www.ama-assn.org.

Address to the House of Delegates: Unity and Courage

It has been a fast-moving and enjoyable six months for me since I became President of the Connecticut State Medical Society. And it has been a productive time as well. I'd like to use my time today to share with you some of the things that have occurred during the past half year that I value the most. And I'd like to try and show how CSMS's activities have energized us, and how they've given us a renewed sense of courage and determination.

One of my goals as President has been to unite us in ways that generate energy, enthusiasm and, most of all, the courage that we need if we are to fix some very bad things that have been going on in medicine. Things that, for the most part, are not of our own making, but rather came about in large measure because of our hesitancy to speak out and oppose them vigorously. Often in the past we failed to act with the necessary courage and determination, because many of the changes in medical care—no matter how irrational, patient-unfriendly and profit-driven they may have been—appeared to have important political backing that seemed too significant to even dare to oppose.

Therefore, in order to try and strengthen our resolve, I have tried to emphasize and enlarge the many and varied constituencies that CSMS represents. Obviously, CSMS is firstly an organization of and for the benefit of individual physicians. An organization that should help each of us so that we, in turn, can serve our patients better.

Be that as it may, our needs do vary, and most of us try to fulfill these needs by concomitant participation in other organizations. But it is my strongly held belief that many of these various other associations must somehow feel represented, tied into, and indeed bound to CSMS in significant and meaningful ways if we are to succeed in our mission of defending good medical care against political and pecuniary onslaughts.

For that reason, I recommended that CSMS actively support those state specialty sections that wish to reactivate themselves. Thanks to the Council's action, sections that choose to do so can now reactivate with the financial and clerical support of the CSMS behind them.

For that same reason I convened a meeting of the President, President-elect, and Executive Director of the CSMS with their counterparts from the county associations. This different mode of meeting, first initiated by Craig Czarsty a year ago, will now become a regularly scheduled feature of CSMS/county interaction. These meetings will have specific, preplanned agendas.

To further emphasize this important state/county tie, county association names will be displayed alongside the CSMS logo on educational opportunity announcements, and at other appropriate times as well.

Furthermore, acting on a request from the county associations, the Council approved the concept of inviting the presidents of the county associations to attend Council meetings as nonvoting guests. And councilors will be encouraged to give association activity reports as a regular part of Council meetings. This will allow a new and vital pathway for sharing creativity and innovation.

We've even set out to foster an early sense of bonding to the society in aspiring physicians-to-be. The Council agreed to follow the recommendation of our Speaker of the House, Dr. Wetstone, to annually fund four summer fellowships for Connecticut undergraduates to pursue a summer of study and research at the University of Connecticut Medical Center. This project has received an initial commitment from us for three years. In addition, CSMS presented a seminar about organized medicine for the student fellows this past summer. We intend to make this an annual presentation. Not only should this help future physicians to recognize a common bond with us, but it is hoped that this will also generate an increased interest in CSMS activities within the University of Connecticut medical faculty as well.

These are just some of the activities that CSMS has undertaken in the past six months to increase the sense of unity and solidarity among both current and future Connecticut physicians. But for what purpose do we make these efforts?

Well, to quote the late Lady Macbeth, we seek "to screw our courage to the sticking-post." Our purpose is nothing

Continued on next page

less than to raise our effectiveness to a level far beyond the simple numbers of people that we are. Our purpose is to enhance the possibility of achieving success in whatever each of us must do, in all of our varied professional configurations, not just through the State Society.

Finally, our purpose is to let others know of our efforts and our determination, because courage is contagious! And believe me, this sort of "energizing" does work! To illustrate this point I'm going to cite for you several recent examples of courage. These examples are from different organizations, CSMS, and two others that interface with us in different ways. Yet all of them have benefited from this central growth of unity, and of courage.

As all of you are aware, CSMS's main focus in the arena of physician/patient advocacy these past few months has been Aetna's "all product contract," and Aetna's various other contracting practices. By numerous techniques Aetna seeks to limit hospitalization, to limit the use of specialists, and to reduce to a minimum the utilization of valuable testing procedures. Aetna actively seeks to eliminate from it's plans physicians who put the patient first rather than the almighty dollar. In short, Aetna works full-time to change the meaning of "medical necessity" from it's plain, physician-defined meaning to a concept of giving the patient the very least amount of care that is needed to get by. Not that Aetna is the only managed care company that engages in many of these practices. They all do, to varying degrees. But Aetna is currently the biggest player and is, in many ways, the most egregious violator of physician contracting rights. And by logical extension, Aetna is potentially the most harmful company when it comes to failing to meet patient needs.

But CSMS, with courage generated by the support of it's members, was willing to step forward, to take the lead, and even to involve the AMA with us in an advertising campaign to advise the public about Aetna's bad behavior. But that's not all we did. We were willing to reduce the enormous complexity of our complaints into a reasonable, yet comprehensive letter that was presented to the Attorney General of Connecticut, who agreed to investigate them. This impartial investigation will not only help us with some of our managed care contracting nightmares, but it will also serve to inform the general public about what kinds of limitations on good medical care are inherent in so-called "medical management" by commercial financial interests! All of this occurred in large part because CSMS knew that the membership was united behind it!

Our Aetna efforts not only caught the attention of our members, it piqued the interest of unaffiliated physicians as well. After we had set our Aetna activities in motion, we sent out a letter to nonmembers, outlining what we had done on behalf of all the physicians of Connecticut. As of today, 76 of those nonmembers have made membership inquiries. That is an extraordinary number of responses to such a mailing, and it clearly demonstrates how courage and unity feed, one upon the other.

Other organizations, sometimes not directly affiliated with us, have also responded to this heightening sense of unity and courage with action as well. At the CSMS Council meeting this past June I presented a report critical of the CSMS/IPA and it's relationship with PHS. That report was based upon personal observations that I had made while a member of the IPA Board of Directors. CSMS/IPA is an organization that is entirely independent of the Medical Society. Our society's direct rights with respect to the IPA are limited to those of a shareholder who can appoint several members of the IPA's Board of Directors. Now in point of fact, the IPA was well aware of many of the problems that I raised, and was already working to resolve some of those I highlighted, as well as others. But I believe that it was the open and frank discussions that ensued following that presentation, and what might be called "the sense of the Council," that encouraged the CSMS/IPA to pursue it's goals much more vigorously. It was in this heightened environment that the CSMS/IPA brought forth it's lawsuit against PHS, seeking to obtain from PHS all of the value that they are entitled to through their contract.

A yet more remote, but important example that I want to bring to your attention is the recent action of the Connecticut Orthopedic Society in bringing suit against Anthem Blue Cross/Blue Shield. In many ways this group is a proxy for the CSMS Section on Orthopedic Surgery. I certainly am not familiar with all of the details of their lawsuit, but I greatly appreciated one newspaper account of it which stated that the Orthopedic Surgeons had sued Anthem for "unreal contracting." I thought that was one of the best descriptions of a managed care contract that I had ever heard.

Finally, we must take note of how this growing courage has expressed itself through individual groups as well. The Fairfield County Medical Group was willing to give up 5,000 of its patients—fully 20% of their practice—rather than continue to suffer from patient care restrictions and the financial games that PHS sometimes plays with individual groups and practitioners.

In January of this year the Northwest Medical Group received a bill from ConnectiCare in the amount of $373,000.00, apparently for spending too much money taking care of sick people! Rather than buckle under, the group demanded an audit which apparently came out in their favor. Despite this, ConnectiCare severed their contract with the group, apparently before the audit was completed. When ConnectiCare decided to contract with physicians individually, many of the doctors sent back signed contracts, but with changes. Quite a difference from the average physician's behavior

Continued on next page

of just a few years ago! Rather than negotiate, ConnectiCare rejected most of those changed contracts out of hand. This may leave 9,000 patients seeking new doctors. But apparently patients have also learned something, and they, too, are changing. Dr. Jim Devanney, with whom I have spoken, has reported that as many as 70% of his ConnectiCare patients have changed HMOs so as to keep him as their physician. And the Northwest Medical Group has filed a formal complaint with the Office of the Attorney General.

PediCare in Stratford, under the direction of Dr. Karen Laugel has, in the past year or so, taken on no less than ConnectiCare, HealthChoice, MedSpan and Aetna! Indeed in many ways it was Dr. Laugel's dogged persistence, her constant pressure on the Fairfield County Medical Association, the Connecticut State Medical Society, the AMA, and me personally, to "do something," that led to the inevitable conclusion that we had to act, and act now, in the Aetna situation.

And so at last, thanks to our unified activities, the phony masks of patient concern are being removed from the managed care companies, and they are being forced to reveal to the public their total immersion in financial gain. Because it's all about money. It always has been. An obsession with making money that totally ignores the CARE in managed care! But physicians knew that all along.

We said long ago that you cannot manage care, you can only manage money. We said long ago that the various laws that allowed managed care to come into being represented special interest law, and not good public policy. And we said long ago that you cannot allow medical care to be decided between employers and financial management companies masquerading as managed care companies, because both of them are looking to enlarge their profits, and nothing else. Medical care should involve patients and physicians. Not lawyers, not accountants, not MBAs and, goodness knows certainly not politicians who are forever raising money to run for re-election!

Connecticut physicians always have and always will protect their patients, despite all of the financial shenanigans and political hyperbole that surround us. So I ask you to stay the path dictated by your sound professional judgment. Rely on your innate instincts to do the right thing. Shun the ethically dubious things that may be dictated by polls, by policy-wonks, or especially by financial penalty clauses in managed care contracts. Most of all, draw upon and enlarge your courage. Don't let it falter. Let it continue to grow, confident that the Connecticut State Medical Society will be here to help you. With unity, and with courage.

Stephen R. Katz, M.D.
President

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ROBERT U. MASSEY, M.D.

ACCORDING to our librarian at the University of Connecticut Health Center, Dr. Ralph Arcari, print journals may be mostly gone by the year 2010. For those of us now past our threescore years and ten, that dreary prospect brings little cheer. When "computer-assisted learning" came on the scene at the School of Medicine in the 1970s, the head of the department of pathology, Irwin Lepow, countered by commending his more favored technology: B.O.O.K., an acronym for "Bibliographic Organization Of Knowledge." He pointed out that this technology had the great advantages of ready access and easy portability; it could be consulted in bed or in the bathtub or at the beach, on a bus or airplane, or late at night in a remote motel in Montana. One could carry it about, mark it up, or stow it away for a more propitious moment. Samuel Johnson observed that "Books that you may carry to the fire and hold readily in your hand, are the most useful after all." Print journals possess all those virtues, and more.

Back in the 1920s and 1930s I knew grown men, some of them my relatives, who had never driven an automobile, and swore they never would. For distances of one or two miles, walking, or a bicycle, was fine. For those of us who grew up in a big city, a trip downtown by bus or streetcar to work or shop or see a movie was easy and cheap, and just as fast. I knew a physician, the president of a Philadelphia medical school, and later an official at the AMA in Chicago, who had never owned an automobile, even into the 1960s.

Clarence Day, writing of his boyhood in the 1890s in New York City, observed that "... when Father walked in the front door of his house and shut the door, he shut out the world ... He thought nothing of this—homes had always been shut off since men began building them, and it seemed only natural." It was not until 10 or 15 years later that Day's father had a telephone installed. "We didn't give it much of a welcome. It seemed to us rude and intrusive, and from the first it made trouble." Doctors, I believe came to hate phones even more than Mr. Day did. A rheumatologist friend of mine—his office was across the hall—one day, after his phone had interrupted his consultation with a patient for the third or fourth time, picked up the black monster, yanked it from the wall by its roots, and slung it far out of his third-story window into the parking lot below.

I have had a series of two personal computers since 1984, used solely for word processing—no world-wide web connections! I believe I would feel about such an electronic invasion as Clarence Day's father did about his telephone! Paul de Palma, an associate professor of mathematics and computer science at Gonzaga University, recalls hearing Roger Schwank, at that time a computer science professor at Yale, insist "that most people do not need to own computers." He concluded his grimly serious article with

> I am afraid that we in computing have made a Faustian bargain. In exchange for riches we are condemned to a lifetime of conversations about the World Wide Web. An eternity in hell with Dr. Faustus, suffering the torments of demons, would be an afternoon in the park by comparison.[2]

Years ago, before I had acquired the moderate cynicism that often comes unbidden with old age, I was shaken to hear a distinguished professor of history assert that progress is largely a deception. "There is mostly only change, or trade-offs," he asserted, "and in the trade-offs we are more often losers than not." Still, I would rather my granddaughter's pneumonia were treated with an antibiotic than with potassium iodide. But then I would rather take the train to Vancouver than fly, and take with me my old paper-back copy of F. Scott Fitzgerald's *Tender is the Night*, the world shut out, than try to juggle a lap-top and cell phone.

ROBERT U. MASSEY, M.D., Professor Emeritus, Division of Humanistic Studies, Department of Community Medicine and Health Care, University of Connecticut School of Medicine, Farmington.

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MEDICAL NEWS CAPSULES

This Month's Reading in Review

TIMOTHY B. NORBECK

A new annual employer health benefits tracking survey released in late October, revealed that a majority of employers favor hotly debated patient protections, including the right to sue health plans.... Ninety-four percent support the right for patients to get an independent review when denied coverage.... Sixty percent of employers support the right to sue a health plan, an increase since 1998 when 46% supported the provisions.

Henry J. Kaiser Family Foundation
(28 October 1999)

"Managed-care companies initially viewed utilization review as key to holding down costs by reducing unnecessary procedures. But it's time to admit that the meddlesome process has backfired. Doctors can follow treatment standards set by the industry without having their every move micromanaged. Audits can flag health care practitioners who consistently stretch acceptable limits. Other managed-care companies would do well to follow United Health Group's lead and jettison the cumbersome review process.

Meanwhile, Congress should not view this bold step by one company as reason to let down its guard on a very important task: passing patients' rights legislation that will hold insurers accountable for their policies."

Hartford Courant editorial
(14 November 1999)

"Just as nuclear power plants once were considered the answer to our energy problems, HMOs were once seen as the answer to our health care problems. As public image of both have faded—fairly or unfairly—their values have eroded dramatically. The HMO's troubles are exemplified by the fact that for-profit HMOs were acquiring each other at about $1,000 to $1,500 per member in the mid-1990s, but now the acquisition price for a 'healthy' HMO is about $300 per member."

A *Boston Globe* article on a study of some
New England HMOs (2 November 1999)

Why Are We Not Surprised?

"What is the 'Medical Miracle of the Century'? It depends on who you ask. A British research group asked doctors. Aspirin was chosen as the greatest medical advance of the century by cardiologists, chemotherapy by oncologists, antidepressants by psychiatrists, and penicillin by doctors in general practice. Lawyers cited million-dollar malpractice insurance policies as the greatest achievement of medicine."

This is True (31 October 1999)

"Beyond cost control, HMOs were supposed to improve care, promote preventive medicine and unleash market forces, giving consumers the ability to shape their own health plans. It turned out to be the wrong consumers. The power is in the hands of purchasers—the large employers and Medicare—and they dictated what the system would look like. Too often, it looks like a contrivance that puts cost ahead of quality."

Remarks of Dr. Paul Ellwood (who helped to
develop the concept of managed care) in
Newsweek (8 November 1999)

Anyone who thinks that one person can't really make a difference should look at a new law just passed in the state of Washington.... A populist businessman introduced an initiative that would impose the tightest straitjacket on the power of legislation to tax that exists anywhere.... Despite the fact that the Washington labor, media, and business community mobilized against the initiative, voters approved (by a 58% to 42% margin) a requirement that all taxes and fee increases be approved by voters or they can't become law.

Wall Street Journal (4 November 1999)

Turning a profit under risk contracts is getting increasingly difficult, according to a Healthcare Intelligence Network's 1999 Capitation Survey released in early November.... The percentage of caregivers reporting profits under capitation contracts dropped from 52% in 1997 to 34% in 1999, reflecting an overall tightening of the risk contracting market resulting from health plans' efforts to cut losses by cutting reimbursement rates.

Healthcare Intelligence Network release
(3 November 1999)

Only in America: A May police report expressed concern over two trucks being driven strangely on a rural road: A man would drive one truck 100 yards, stop, walk back to a second truck, drive it 100 years past the first truck, stop, walk back to the first truck, drive it 100 yards beyond the second truck, and so on.... According to police, the man's brother was passed out in one of the trucks so the man was driving both trucks home.

The Messenger (Madisonville, Ky)
(15 November 1999)

TIMOTHY B. NORBECK, Executive Director, Connecticut State Medical Society.

Letters to the Editor

Letters to the Editor are considered for publication (subject to editing and abridgement), provided that they are submitted in duplicate, signed by all authors, typewritten in double spacing, and do not exceed 1-1/2 pages of text (excluding references). They should not duplicate similar material being submitted or published elsewhere. Letters referring to a recent Journal article should be received within six weeks of the article's publication.

A Question for Mr. Kelly and John J. Phelan, Ph.D.

Letter to the Editor: I read with interest the article, "The Future of Managed Care: Integration of Financing, Risk Management, and Delivery" in the October issue of *Connecticut Medicine (*Conn Med 1999; 63:603–10*)*, which was delivered today. I retired in 1990 after 35 years of solo / two-man / solo practice and eight years in locum tenens medicine. I enjoyed every minute of it, but would not study medicine now even if "my blue fairy" made me 45 years younger!

Quite frankly I worried about the patient's care, whether I had done all I could, or should have done less if the patient lingered in pain; but I would not have been able to render the quality of care I gave had I been worried about "losing my shirt," if the cost had risen well above the estimate. In this society everybody is specialized; I enjoyed the challenge of working with the patient to solve his/her problem. If I had wanted to feel the thrill of gambling I would have elected to go into risk-taking (insurance).

Question for Mr. Kelly and John J. Phelan, Ph.D: do they carry homeowners insurance on their place of residence? That is the purpose of societies: to work together to share the burden loaded on one person or family. If the HMO CEOs and the economists want the providers to shoulder the risk, but to keep their hands "out of the till," I say it's time for providers to sign contracts for only six months, so that they (the providers) will face a shorter period of servitude! Thanks for listening.

Donn C. Barton, M.D.
Glastonbury

In Response to Dr. Katz's Question "Doesn't Anyone Sell Reasonable Insurance Any More?"

Letter to the Editor: I am a 64-year-old recently retired physician who was covered under COBRA for my health insurance. My former surgical group has now dissolved and I have been forced to hunt for medical insurance in the open market since COBRA no longer applies. Now that I am no longer "employed," it appears that insurance companies are no longer interested in my business. I am an individual, not part of a group and this makes me an insurance outcast in our society. I have not changed; I am still in excellent health, not overweight, exercise every day, do not smoke, have never been hospitalized or had major surgery and can afford modest premiums; yet they treat me as an untouchable. Any mild or compensated (by Medication) illness reported on an application either immediately makes one ineligible or excludes the insurance company from ever helping you with that illness.

After over 40 years in the medical profession it seems that I have been cast aside as a worthless member of society. I have joined the over 40 million uninsured in our country. In my case, in 11 months, I shall be saved by Medicare, but now I do understand the enormous problem that is faced by nearly 15% of our population. Why can not each and every citizen of the United States of American have the same health benefits that employees of the Government enjoy? Or better than that, is it not time for a complete overhaul of the present nonsystem? Lets eliminate employment based health insurance, provide universal coverage, allow for choice of physician and hospital and let each purchaser determine for themselves what they can afford in addition to basic coverage.

I realize that any major change in our health system will take time, but it is extremely important that we start dealing with this problem now, for the sake of ourselves, our children, and future generations.

Philip I. Kotch, M.D.
Newton

Insurance Companies Rip Off Medicare

Letter to the Editor: Medicare and its recipients took double blows from the insurance industry recently.

First, the General Accounting Office, the investigation branch of Congress, reported it had uncovered rampant fraud among Medicare carriers, the same insurance companies that supposedly monitor and pay the claims submitted by doctors and hospitals.

The investigators discovered that insurance clerks, with the tacit approval of their supervisors, willfully lost or destroyed claim forms, ignored phone calls from claimants, and improperly billed the government. Ironically, for years doctors and hospitals have alluded, futilely, to such offenses.

The second blow was struck when the HMO industry announced it would stop providing free drug coverage for its Medicare enrollees next year.

Seniors who were duped into joining HMO Medicare plans by promises of lower premiums and free drug coverage now find they will have neither. Previously, the HMOs had abandoned their Medicare subscribers in many areas they deemed unprofitable.

If there is any doubt that corporate managed care is primarily a money-oriented business operation, these latest transgressions by the health insurance industry should prove otherwise. Last year the chief executives of these same health-care companies received multimillion-dollar salaries and stock options.

America's trillion-dollar health-care system requires better management. Our money is being ripped off by an obstinate clerical bureaucracy and used to help sustain lavish corporate salaries.

Surely we can devise a more efficient and caring single-payer system. It's long overdue.

Lee Sataline, M.D.
Cheshire
Reprinted from the *Hartford Courant*,
Saturday, 25 September 1999

CALL FOR PAPERS

Members of the Connecticut State Medical Society reading papers before other organizations are invited to submit their papers to the *Journal* for consideration. Authors preparing manuscripts for submission to *Connecticut Medicine* should consult **Information for Authors**. This is published in most issues of *Connecticut Medicine* or may be obtained from the *Journal* office. Adherence to the instructions will prevent delays both in acceptance and in publication.

Papers prepared on a word processor should be submitted on a diskette along with the hard copy.

Please send them to:

H. David Crombie, M.D.
Connecticut Medicine
160 St. Ronan Street
New Haven, CT 06511

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From the Executive Director's Office

SUMMARY OF PROCEEDINGS
CSMS HOUSE OF DELEGATES — SEMI-ANNUAL MEETING
RAMADA INN, MERIDEN—17 NOVEMBER 1999

Reports and Addresses

The House received reports, addresses and/or remarks from the president, the Council, the AMA Delegation, the executive director, Legislative Committee, Connecticut Medical Insurance Company (CMIC), and CSMS-IPA. Most of the reports were published in the Handbook previously distributed to the delegates. The reports of the president, Dr. Stephen R. Katz, and the executive director, Tim Norbeck, appear elsewhere in this Journal. Richard Blumenthal, Esq., Attorney General for the State of Connecticut, was the guest speaker.

Special Awards

Dr. David Parke, chair of the CSMS Legislative Committee, presented the CSMS Legislative Award of Excellence for Advocacy and Legislative Leadership on Behalf of Physicians and Patients to Representative Mary Eberle and Representative Lenny Winkler. The awards were given during the luncheon.

Principal Actions Taken

(a) ***Report of the President,*** Stephen R. Katz, M.D., Fairfield: Dr. Katz's report to the House appears as the President's Page in this issue of *Connecticut Medicine*. The report was received as information.

(b) ***Report of the Council,*** Dickerman Hollister, Jr., M.D., Greenwich, chair. The House voted to accept, as information, the report of the Chairman of the Council, which reviewed the activities of the Council since the last meeting of the House of Delegates. Minutes of the interim Council meetings have already been published in *Connecticut Medicine*. Special emphasis was given to the reports from related organizations such as CSMS-IPA, the various reports given at each meeting by the president, the executive director, and the chairman of the Committee on Legislation. The Council also submitted a budget for the year 2000 with the recommendation that the operational, capital, and physician health and education budgets be approved and that the dues remain at $390. The report of the Council and the budgets and dues structure were approved by the House of Delegates.

(c) ***Report of the AMA Delegation,*** Joseph S. Sadowski, M.D., Hartford, chair.

It was reported that Dr. Thomas R. Reardon of Oregon was installed as AMA President. There were over 200 reports and/or resolutions, and members of the CSMS delegation were assigned to the various reference committees. The issue that received the most attention was the AMA House of Delegates' voting to establish a national collective bargaining unit representing employed physicians and some residents. The unit that the House approved will represent employed physicians in negotiations with hospitals, health plans and universities concerning employment contracts and patient care.

Other issues discussed were:

- AMA's negotiating with HCFA to get rid of the financial incentives which HCFA has tried to establish to get Medicare recipients to report their physicians if they feel they are being improperly billed.
- Aetna merger.
- Raising contributions to pension funds because of inflation.
- Opposition to non-MD prescriptive ability.
- AMA opposition to the Inspector General's officers coming into a physician's office when he or she has been accused of fraud and abuse.
- Economic credentialing.
- Ethical issues.
- Confidentiality of patients' records and E&M coding.

The complete proceedings may be obtained by visiting the AMA website, www.ama-assn.org.

The report was received as information.

(d) ***Report of the Executive Director,*** Mr. Timothy B. Norbeck, New Haven. The House voted to accept the report of the executive director as information, which appears in its entirety at the conclusion of this summary.

The report was received as information.

(e) ***Legislative Report,*** David Parke, M.D., chair, Committee on Legislation. A comprehensive written report was distributed to all members of the House of Delegates. The report listed the top legislative priorities for the 2000

State Legislative Session and included a report on the status of the Office of Health Care Access (OHCA) declaratory ruling on office-based surgery. Some of the top priorities listed were:

- Restore Medicaid funding for the dual-eligible Medicare patients.
- Oppose Certificate of Need requirements for physician's office surgery outlined in the OHCA declaratory ruling.
- Support a statutory definition of surgery.
- Seek additional managed care reforms.
- Support lifting of excessive formulary restrictions and other managed care issues.
- Establish fairness standards in physician contracting.
- Ban automatic downcoding of claims without proper investigation.
- Seek Workers' Compensation medical care plan reforms and prompt payment requirements.

The report was received as information.

(f) ***CSMS-IPA Report,*** Ken Lalime, executive director. Mr. Lalime noted that ongoing operations of the CSMS-IPA are provided to the CSMS Council and published to the CSMS members through Council minutes. Also, whenever requested, IPA physician leaders and management have provided informational updates to the county associations as well as other physician organizations. It was reported although the efforts of the IPA Board of Directors and staff have been directed at managing the IPA under the new agreement with the Plan, there was no reciprocal cooperation in this regard. On 4 October 1999, the Board of Directors of the IPA determined that in order to enforce the current contractual obligations of the Plan, a lawsuit had to be filed. Goals in filing this complaint have been and remain consistent with the Board's desire to bring resolution to the outstanding issues and attempt to negotiate an agreement with the Plan that prevents reoccurrence of the 1999 experience. The Board is committed to taking the necessary action needed to maintain a role as advocate for IPA physicians and providers. Dr. David Thompson, president of the IPA, spoke briefly and responded to questions from the audience.

The report was received as information.

(g) ***Report on Connecticut Medical Insurance Company (CMIC).*** Sultan Ahamed, M.D., president and chairman of the Board of Connecticut Medical Insurance Company (CMIC) reported the following:

- 1 October 1999 marks CMIC's 15th anniversary. Since the company's creation, CMIC has become the insurer of choice for nearly seven out of 10 physicians across the state and has over 3,700 policyholders.
- A six-million-dollar policyholders' dividend was declared and will result in an average 20% premium credit for members.
- Policyholder repayments top $33 million. Since CMICs inception, $8.2 million of surplus contributions have been returned to members.
- Self-study courses provide an opportunity to earn risk management credits. Members earn a 5% risk management premium credit and 5 Category 1 CME credits by completing the course. The credits are applied at renewal premium at all limits of liability.

Moving forward from its 15th anniversary to the next millennium, CMIC will not rest on its laurels. The company will build on its strong foundation and, in partnership with our many members, meet the challenges of the future.

The report was received as information.

(h) ***New Business:*** Nine resolutions were introduced and were acted on as follows:

Resolution: Definition of Surgery

Introduced by the Connecticut Dermatology and Dermatologic Surgery Society:

RESOLVED: that the Connecticut State Medical Society adopt the following definition that has been adopted by the Connecticut Dermatology and Dermatologic Surgery Society as the official CSMS definition. "Surgery means any procedure in which human living tissue is cut or permanently altered by mechanical or energy forms, including but not limited to, electrical or laser energy or ionizing radiation, or any procedure that significantly invades the body or body cavities for therapeutic or diagnostic purposes."

It was voted to refer this resolution to the Council for development and adoption of a definition for the Legislative Committee before the next legislation session.

Resolution: Student Membership

Introduced by the New Haven County Medical Association:

This resolution was adopted with minor amendments:

RESOLVED, that the CSMS offer membership, at no cost, to medical students at the University of Connecticut and Yale University, beginning with the classes entering in 2000, and be it further

RESOLVED, that the CSMS encourage the county medical associations to do likewise, and be it further

RESOLVED, that the CSMS offer memberships in the AMA to all interested medical students at the University of Connecticut and Yale University beginning with the classes entering school in 2000.

Resolution: Specialty Society Representation in House of Delegates

Introduced by the New Haven County Medical Association:

The resolution to amend the CSMS Bylaws to provide for specialty representation in the House of Delegates was discussed, and it was voted to refer the resolution to the Council to be redrafted to provide for one delegate and one alternate from each CSMS specialty section, and to invite other specialty groups that might wish to participate in the House of Delegates to apply for specialty section status.

Resolution:
Accumulation of Medical Liability Data in Connecticut

Introduced by the Fairfield County Medical Association:

This resolution was adopted with minor amendments:

RESOLVED, that the Connecticut State Medical Society gather medical liability data and disseminate a report annually to the members of CSMS delineating the reasons for medical liability actions, the results or disposition of the actions, the types and numbers of actions by medical specialty, and suggestions for avoiding similar medical liability actions in the future.

Resolution:
Notification of Patients when Physician(s) Have Terminated their Contract with a Health Insurance Company

Introduced by the Fairfield County Medical Association:

This resolution was not adopted.

Resolution:
Health Insurers to Have Their Contracts with Caregivers Begin and End on a Specific Date and that No Changes be Introduced During the Dates So Specified Unless Agreed Upon by Both Parties

Introduced by the Fairfield County Medical Association:

This resolution was referred to the Council as amended.

RESOLVED, that the Connecticut State Medical Society seek legislation or an administrative regulation requiring that each health insurer contract with caregivers for an annual period, during which time period the significant terms may not be altered unilaterally so that the health insurance provider directory from which patients select physicians be accurate for a defined period of time, thereby preventing potentially dangerous disruption of a patient's care.

Resolution:
Preventing Insurance Companies from Requiring Prior Authorization When They Are the Secondary Insurer

Introduced by the Fairfield County Medical Association:

This resolution was adopted.

RESOLVED, that the Connecticut State Medical Society seek legislation or an administrative regulation requiring that when health insurance companies act as a secondary insurer, they must pay their portion of the claim for which they are financially responsible without requiring the physician to obtain from the secondary carrier prior authorization for services rendered.

Resolution:
Re-evaluation of the CSMS House of Delegates

This resolution was withdrawn.

Resolution:
Reaffirmation of CSMS Policy Opposing the use of Board Certification by Hospitals and HMOs as a Single Criterion for Non-acceptance on the Medical Staff or Provider Panel

This resolution was approved as amended.

RESOLVED, that the Connecticut State Medical Society shall again seek legislation prohibiting hospitals and HMOs from using board certification (or board eligibility) as a sole criterion for accepting or terminating physicians from hospital medical staffs or HMO provider panels, and to communicate this to hospitals and HMOs.

AWARDS
CSMS Past Service Awards to County Councilors

Certificates have been issued to the following physicians for their service as members of the Council:

Stanley J. Keating, Jr., M.D., Simsbury, Councilor-at-Large, 1998–1999

Hartford County

Alfred Herzog, M.D., Hartford, Associate Councilor and Councilor, 1996–1999

Chandra N. Narayanan, M.D., East Hartford, Associate Councilor, 1996–1999

New Haven County

Ferdinand J. Montegut, Jr., M.D., Shelton, Associate Councilor and Councilor, 1993–1999

New London County

Thomas H. Lesnik, M.D., New London, Associate Councilor and Councilor, 1989–1999

N.B.: *The foregoing is a summary of the proceedings and actions of the House of Delegates. Detailed minutes of the meeting are on file at 160 St. Ronan Street, New Haven, for perusal by any interested member of the society.*

A blood transfusion allowed Sylvia to bring her sweet Diana into this world.
It also may have put her at risk for hepatitis C.

Sylvia made it through that difficult delivery. That's what put her, along with thousands of others who had major surgery, were treated for serious injury or illness, or were born prematurely, at risk for hepatitis C—because many of them had a life-saving blood transfusion. If you received a transfusion or organ transplant ***before July 1992,*** you should be tested for hepatitis C, a disease that can damage your liver and cause it to fail. To learn more, call 1-888-4HEP CDC (1-888-443-7232) toll-free, or access our website at: www.cdc.gov/hepatitis

Ask your doctor if you or your loved ones should be tested for hepatitis C.

HEPATITIS C

YOU MAY BE AT RISK IF YOU HAD A BLOOD TRANSFUSION *BEFORE JULY 1992*

DEPARTMENT OF HEALTH & HUMAN SERVICES · USA

CDC
CENTERS FOR DISEASE CONTROL AND PREVENTION

Address of the Executive Director
CSMS House of Delegates—Annual Meeting
17 November 1999

TIMOTHY B. NORBECK

FRANK Wurzbacher returned home after undergoing castration surgery—which was the only option available to him to treat a very aggressive prostate cancer, after his HMO had refused to pay for further injections of leupron. On his answering machine was a message waiting for him from his health plan.

Apparently it had all been a mistake, the voice said, the decision to deny insurance payments for his cancer fighting leupron injections had been in error.

The insurer was sorry for any inconvenience, but now it would pay for the monthly treatments. For Frank, that news came a tad too late. For some reason that explanation didn't satisfy him, and he filed suit because neither he nor his physician had been notified, prior to the loss of his testicles, of the insurer's change of policy. But, of course, he had no remedy under ERISA.

But then, again, if ERISA applied to armed robberies, convicted felons would only have to return the money. It has been said that when Congress makes a law, it becomes a joke—and—when the Supreme Court makes a joke, it becomes a law. They must have had ERISA in mind.

To the insurer, this was just another one of those anecdotes or statistics. But we should remember what every physician knows: that statistics are real people, with the tears wiped away.

As we have come to know all too well, insurers are not exactly known for their generosity. There's the story about the director of the homeless shelter who made an appointment to talk with an insurance company CEO who had a reputation as a real skinflint. She began by saying, "The newspapers report that you have a very large income, and yet you rarely donate to any local charities. Wouldn't you like to contribute in some way?"

Snarled the CEO in response: "Well, do your records also show that my mother is dying and has enormous medical bills? That my sister's husband died in an auto accident, leaving her penniless with three children? Do they show that my brother is blind and confined to a wheelchair?"

Very embarrassed, the woman apologized and said, "I had no idea" … but the CEO cut her off in mid-sentence. "So if I don't give any money to them," he said, "why should I give any to you?"

As Attorney General Richard Blumenthal mentioned earlier, the AMA, CSMS, and his good office have worked side-by-side in addressing Aetna's contracting inequities. AMA has been a tremendous help in this important effort. We remain hopeful that he will find, as did the Nevada insurance commissioner, that the insurer's pernicious, onerous, and coercive "all-products" clause is in violation of Connecticut's Unfair Insurance Practices Act. Thanks to Mr. Blumenthal's strong sense of fair play and dedication to safeguarding the public interest, medicine's point of view is getting a full and complete hearing during his investigation.

And look what a small but determined group of physicians managed to accomplish in Washington. As you know, the U.S. Senate passed managed care reform on July 15—reform so mild it should have been called the HMO protection act—and many were poised to ram this same burlesque through the House.

Republican physicians and dentists in the House, numbering only eight (one Republican MD went along with the charade), bucked the leadership—putting patients before party—and wouldn't accept the lip service offered by the leadership, insisting on real reform rather than the Senate cosmetic surgery. And this small band of rebels forced House Speaker Hastert to reconsider and put off a vote until last month. That's what they did. But as you will see, the Speaker would get the last word.

The resounding victory of the Norwood-Dingell legislation on October 7th was the result—and the right for physicians to determine "medical necessity" and for patients to sue HMOs and hold them accountable. It will be addressed early next year, although it is becoming more and more difficult for medicine to find bipartisan support for anything these days.

We will need to be more active politically—whether we like it or not. I remember a physician telling me once that it seemed unprofessional for him to get involved in politics. While I can understand some of that cynicism, walking away from it is not the answer. I'm always reminded of that interview where a "man in the street" was asked why people were turned off to politics. "Is it ignorance or apathy?" the interviewer asked. "I don't know and I don't care," was the response. We cannot afford to think like that.

Prior to that stirring victory in the House last month, the AMA did something very notable. You will recall that I mentioned earlier that all Republican physicians but one in the House of Representatives refused to go along with the leadership's stonewalling on real reform. He was chosen by House GOP leaders to be a spokesperson for their status quo position on managed care reform.

On July 27th—12 days after the Senate vote—the AMA faxed letters to every physician in his central Kentucky district, accusing him of choosing "to ignore the concerns of local patients and physicians. Tell him that you are his constituent and a physician or a physician's spouse," the letter went on to say, "and ask him to support real reform." Hard ball tactics? You bet. But do you know that the very next day following a torrent of telephone calls he was clearly no longer willing to be a spokesperson for the leadership. This is what is necessary in today's new politics.

What that July 15th Senate vote told me, is that there seem to be too many Republican Senators and Democratic Senators, and not enough United States Senators.

Because the for-profit health plan's primary legal obligation is to its shareholders, and because it escapes accountability to its patients, its bottom line is always boosted by a denial of coverage of medical services. This trade-off is well illustrated in Aetna's recent annual Report to Shareholders, where Aetna President Richard Huber noted that in 1997 "earnings were hampered by higher medical costs." Clearly, the for-profit health plans cannot be viewed as patient advocates. It is inevitable, that given their leverage and shareholder pressure, some health plan managers will simply go too far, as the castrated Mr. Wurzbacher was to find out.

And next year there will be the great push to enact HR 1304, the Campbell bill, to allow doctors to negotiate with insurers without fear of antitrust prosecution. With 172 sponsors, including 20 of the 37 House Judiciary Committee members, it should have come before that committee for markup three weeks ago. But Speaker Hastert blocked any consideration of it for this year—payback you can bet, for medicine's support for Norwood/Dingell. Even worse was the Speaker's selection process of the Members of Congress who will comprise the Senate and House Conference Committee, and who will determine the outcome of Norwood/Dingell next year.

Left off the House Republican delegation were the two people who wrote the bill—Charlie Norwood—the dentist from Georgia and author of the legislation—and Greg Ganske—the plastic surgeon from Iowa—who worked feverishly on it. In fact, take a guess at how many of the announced 13 House Republican conferees (another eight will be Democrats) voted for Norwood/Dingell in that resounding 275–151 victory? The answer: one. Just Florida Congressman Michael Bilirakis supported true patients' rights—and he, only after supporting weaker alternatives that failed. One other conferee—Joe Scarborough, also from Florida—was absent on the vote due to a back injury. The other eleven all voted against it. One Congressman—the most senior member in the House, having served since 1955—said that he couldn't recall a single instance over that period of time when a principal sponsor of a successful bill was denied a spot on the House-Senate Conference Committee. But that's Washington politics. Payback from the Speaker.

On the Senate side, comprised of seven Republicans and five Democrats—all seven Republicans favor the weaker Senate version. The only MD in the Senate, Bill Frist from Tennessee, is one of those seven Republicans—but he reportedly wants to run for President and doesn't wish to alienate the Republican leadership.

That news should prompt physicians all over the country to reach for their checkbooks and join their state PAC and AMPAC—if they haven't already done so. We have seen sleight of hand before, and deals from the bottom of the deck, but this one takes the cake.

That sabotage reminds me of a complaint registered by a U.S. Senator earlier this summer over the heavy-handedness of a House—Senate Conference Committee. He said the conference committee agreement wasn't "government of, by and for the people." Instead, it was "government by four people."

The need to restore balance to the health-care marketplace has become an issue of paramount importance to physicians who struggle daily against—as Dr. Michael DeBakey puts it—"the arrogant and imperious intrusions of the clinically untutored into medical decisions and physician compensation." We have reached the ridiculous point where a physician can actually pay his attorney $200 or more an hour for legal services, and yet is allowed only $156 a year to treat that lawyer who is his patient.

Speaking of Dr. DeBakey and the way some devalue the worth of physician's services:

An auto mechanic was removing some engine valves from a car on the lift when he spotted the famous heart surgeon who was standing off to the side, waiting for the service manager.

The mechanic shouted across the garage, "Hey, DeBakey ... is that you? Come over here a minute."

The famous surgeon, a bit surprised, walked over to where the man was working on a car. Said the mechanic, "Mr. Fancy Doctor, look at this work. I take the valves out, grind'em, put in new parts, and when I finish, this baby will purr like a kitten. So how come you get the big bucks, when you and I are doing basically the same work?"

DeBakey replied, "Because I do it with the engine running."

The Campbell bill—HR 1304—is an absolute must for patients and physicians. As you know, the present antitrust laws are extremely complex and the penalties for violation are severe—including potential prison terms. A few years ago, a small group of dentists was investigated and prosecuted for violations of the antitrust laws after they met informally to discuss the possibility of lowering fees. A federal judge threw out the jury conviction-but they had to go through a lengthy appeal. Ultimately, they spent more than one million dollars in legal fees and endured psychological and professional damage. This message is not lost on physicians.

Not a fair way to treat those who serve the public. But then again, not everybody reacts to acts of kindness and generosity in the same way.

A barber gave a haircut to a priest one day. The priest tried to pay for the haircut but the barber refused payment saying, "You do the Lord's work." The next morning the barber found a bible at the door to his shop.

A policeman came to the barber for a haircut, and again the barber refused payment saying, "You protect and serve the public." The next morning the barber found a dozen doughnuts at the door to his shop.

A lawyer then came to the barber for a haircut, and again the barber refused payment saying, "You serve the justice system." The next morning the barber found a dozen lawyers at his door waiting for a haircut.

The bottom line for physicians is to stay upbeat—some good things are happening out there. But there has never been such a need for unity.

Physicians need to keep in mind the fable about the young lion and the cougar. Both thirsty, the animals arrived at their usual watering hole at the same time. They immediately began arguing about who would satisfy his thirst first.

Each howled and snarled that he would rather die than give up first drinking rights. Their anger turned to rage and the fighting began. But then they both looked up and saw a flock of vultures circling overhead, waiting for the loser to fall.

Quietly, the two beasts turned and walked away. Discovering who the real winners would be was all they needed to end their quarrel.

The time has also come, I believe, to stand up and demand that physicians be once again called physicians. You and your colleagues don't spend one third of your lives in formal education in order to be called "providers." No proud mother has dreams of her valedictorian child making it into "provider" school. And you do not deliver a "product" to "customers." It is just another way for insurers to dehumanize, demean, and devalue you and your services. That strategy has been so successful that even some medical organizations and physicians themselves are using that offensive term.

Provider is an impersonal term used intentionally to take away your spirit and pride. I hope that Dr. Timmerman's liaison committee with the HMO medical directors could address that offensive policy in addition to the many others.

I still long for the day that physicians are once again rewarded, instead of punished, for their excellence in caring for us—and I think we are closer to that day than we were just two months ago.

I am more confident than I have ever been that we are going to change the political landscape—restore a great deal of that physician autonomy—successfully stand up to those who would compromise patient care—and win the necessary battles ahead. But that success will require physician unity—physician political action—and physician optimism and determination.

After all, if it is possible to devise a way to keep teenagers out of shopping malls—as they have done successfully in Australia—anything else should be relatively easy. Malls in Australia have taken to playing 1938 Bing Crosby music continuously and very loudly—particularly at the entrance—and using pink fluorescent lights which highlight pimples. Teenagers just don't hang out there anymore!

Now we must find the right music to keep intrusive HMOs out of patient care—the first notes, the overture, must begin with proper accountability for managed care through a patients' right to sue when damaged through an insurer's negligence.

Let's face the facts: those bottom-line feeders just can't appreciate the medical ethic to which you are sworn—putting patients first!

In closing, there was an ancient poet who wrote: "It is the human touch that means more to the aching heart than bread, or shelter or wine. For shelter is gone when the night is gone, and bread lasts but a day, but the sound of your voice, and the touch of your hand, sings on in the heart always." That is something very special, something specific to your noble profession! It is something that patients, at least, will never want to do without.

BOOK REVIEW

The Professor and the Madman:
A Tale of Murder, Insanity and the Making of the Oxford English Dictionary.
By Simon Winchester.
Harper Collins Publishers, Inc., 1999. xiii +242 pp.
$13.00. ISBN 006099486X

Physicians in Connecticut may be particularly interested in reading this fascinating story of the making of the *Oxford English Dictionary*, interwoven with the account of Dr. William Chester Minor, a graduate of Yale Medical School, a resident of Connecticut, and who is buried in a New Haven cemetery. Sadly to say, this surgeon who served in the Civil War, has come down in history, not because of his contributions to medicine, but because while confined to a hospital for the criminally insane, he made a major contribution to the preparation of the greatest dictionary in the world. Yes, a murderer, but also a man who would develop a friendly relationship with his victim's widow, and who would contribute money to the victim's family (as well as to the Editor of the *Oxford English Dictionary* so that he could attend a conference in South Africa).

The Editor, Dr. James Murray, pursuing the goal of learning the first time a word was used, "the history of meaning" and "the life history of each word," called upon countless readers to search the English literature and report to him the quotation which signalled the unique way a word was used. In a cell in the Broadmoor Asylum for the Criminally Insane in Crowthorne, Berkshire, Dr. Minor responded to the appeal by sending in 12,000 quotations in a space of two years. Dr. Murray acknowledged this contribution by writing "So enormous have been Dr. Minor's contributions during the past 17 or 18 years, that we could easily illustrate the last four centuries from his quotations alone." This then is a story of obsessions—to define and give the history of every single word in the English language, and the delusional obsession of a "pathetic" gifted man who labored over his books in the daytime and was tortured by his conviction that every night people entered his sleeping quarters to entice him or force him to participate in sexual orgies.

For 11 years Dr. Murray did not know of the history of his valuable collaborator, thinking that he might be a surgeon attached to the Asylum from which he received the mail. There are contradictory stories as to how he came to learn that Dr. Minor was a patient in this hospital. The two men entered into a 20-year relationship, but apparently little or no reference was made to the personal account which had brought Dr. Minor from his life in Greenwich, Connecticut to Bedlam in Great Britain.

In developing this story, the author, by a tour de force, utilized the same technique as was used in the creation of the great dictionary. That is he constantly veers off to expand on the facts that are known. These tangents and side-bars are intriguing and tantalizing. We are introduced to the strange behavior of a "Brazilian fishlet known as *candiru* ...," or how deserters in the Civil War were branded. And yet, strangely enough there are lacunae, odd lapses, such as our being told that two of Dr. Minor's brothers committed suicide, and yet nothing more than that simple statement.

But back to Dr. Minor. As he grew old and infirm, his brother made arrangements for his transfer from England to St. Elizabeth's Hospital in Washington, D.C. There he lived for a number of years, but was once more transferred to the Institute of Living in Hartford, Connecticut, described by the author as "for the elderly insane in Hartford, Connecticut, known as The Retreat." There he died on 26 March 1920, at the age of 85. "He might have been mad, but like Doctor Johnson's dictionary elephant, he had been 'extremely long lived.'"

In this book, so lovingly involved with words, serendipity plays a major role. How would one diagnose Dr. Minor's condition? How would one treat it? Did Kraepelin really recognize the importance of lithium's involvement in manic-depressive illness? And was Dr. Minor thinking of the admonition, "If your right hand offends you ..." when he cut off his penis?

Leo H. Berman, M.D.
Westport

New Deal Medicine: The Rural Health Programs of the Farm Security Administration
by Michael R. Grey, 238 pp.
Johns Hopkins University Press, 1999.
$42.50. ISBN 0801859395

Dr. Michael Grey, Associate Dean of Continuing Education at the University of Connecticut School of Medicine, has written a subtly provocative history which has striking relevance to the unresolved problem of health care in the United States at the century's end. By a precise analysis of a little studied New Deal program for health care in the Depression years, he points out multiple similarities to our present dilemma. He accomplishes this with little polemic and with enviable scholarship. While his bias for national health insurance seems clear, he argues powerfully for the historical precedents.

The Farm Security Administration was initially created to provide loans and grants to poor farmers. Soon after its inception, the poor health of this rural population was recognized to be a major impediment to the rehabilitation of America's small farms. Consequently, the program was expanded to provide immediate ongoing and preventative medical care, enlisting the skills of rural physicians, nurses and public health service physicians. Funding sources included individual fees, federal monies and private philanthropy.

This health care service delivered comprehensive care for over a decade, and by most objective measures, was highly successful. Opposition from organized medicine was predictable. Anticipated government bureaucracy, low reimbursement for physicians, payment by capitation and loss of significant physician autonomy were frequent complaints. Local practitioners were easier to win over. They saw firsthand the results of accessibility of and commitment to good care. Many physicians' organizations were cautious in their criticisms and withheld condemnation.

It is difficult not to see this first national health service, a prototype for our assessment, as a great success. Why then did it not progress from this fledgling program to national health insurance along with other western countries? Dr. Grey offers several cogent speculations to explain the program's demise. The independent character of the populace, hesitant to adopt collective solutions when the needs of the Depression had lessened, was a feature used to great advantage by the medical profession. The rise of voluntary health insurance, strongly supported by organized medicine and the Farm Bloc, was another successful counter to any national health insurance proposal. Finally, political opposition to New Deal programs grew stronger, and legislation for national health insurance was soundly defeated.

Now, some 65 years of debate, effort and opposition to a national health insurance have passed. The fears and problems are nearly the same, as admirably detailed in Dr. Grey's history. Reading it carefully will be of great benefit to every one of us concerned with our country's health care. This is a work not only highly recommended but essential to any understanding of where we are now and how we got there, with respect to national health care.

James M. Streeto, M.D.
Wethersfield

Alma Farm: An Adirondack Meeting Place
by Norman Francis Boas, M.D. and
Barbara Linton Meyer
112 pp, illustrations, epilogue, appendix, index
Boas & Meyer, Publishers, Mystic, Connecticut, and
Bolton Landing, N.Y., 1999.
$18.00. ISBN 0-9672626-0-7

Dr. Boas is a retired internist and rheumatologist who practiced in Wilton and New London and has been a member of the Connecticut State Medical Society for 45 years. The authors are third and fourth generation descendants of German American families who emigrated to this country in 1816 and 1884 to pursue their careers in business and anthropology.

Their descendants included an extraordinary group of scholarly individuals many of whom were physicians, including Dr. Abraham Jacobi who held the first chair of pediatrics in America and was president of the American Medical Association; his wife Mary Putnam Jacobi who was the second woman to receive a medical degree in the United States; Dr. Ernst Krackowizer, a founder of the German Hospital (Lenox Hill Hospital) in New York City; Dr. Willy Meyer a leading cancer surgeon; and Dr. Ernst Boas former medical director of Montefiore Hospital and a leading New York cardiologist.

Their families interacted in the summers at Alma Farm on the shores of Lake George, New York and attracted many others prominent in the medical, business, scientific, educational, legal, artistic, and political fields including Carl Schurz who helped Abraham Lincoln win election, served as a general in the U. S. Army and became Secretary of the Interior. Though Alma Farm ceased to exist after almost 50 years in 1925 when the property was sold to the State of New York, the descendants continued to interact long thereafter.

The book is a scholarly compilation of interrelationships, friendships and marriages among some very distinguished scholars and leaders of the 19th- and 20th-centuries.

Robert D. Langmann, M.D.
Stonington

IN MEMORIAM

BURACK, JASON O., Tufts University School of Medicine, 1939. Dr. Burack was in private practice in Norwalk and served on the staff of Norwalk Hospital for 50 years retiring in 1997. He was a member of the Fairfield County Medical Association and the Connecticut State Medical Society. Dr. Burack died 19 August 1999 at the age of 85.

DISKAN, A. ELMER, Temple University School of Medicine, 1937. Dr. Diskan practiced medicine in Manchester for 50 years. He was active aboard the medical ship Project Hope, as well as serving on its board of directors. He was a member of the Hartford County Medical Association, the Connecticut State Medical Society, and the American Medical Association. Dr. Diskan died 28 July 1999 at the age of 86.

DOERING, ROBERT W., University of Kansas School of Medicine, 1948. Dr. Doering practiced medicine in Bridgeport for 32 years and served on the staff at Bridgeport Hospital. He was a physician founder, president, and first medical officer of Physicians Health Services from 1977 to 1984. He went on to serve as chief of internal medicine at El Progresso Delsierto Clinic in California. Returning to Connecticut in 1990, Dr. Doering continued to practice medicine at Fairfield area clinics. Past president of the Greater Bridgeport Medical Association, Dr. Doering was a member of the Fairfield County Medical Association and the Connecticut State Medical Society. Dr. Doering died 24 August 1999 at the age of 77.

KAETZ, HARVEY W., Tufts University School of Medicine, 1940. Dr. Kaetz served as Medical Director and attending clinical physician in internal medicine at the Yale University Health Center. Prior to that, he was in private practice in the New Haven area for over 25 years specializing in oncology and hematology. He was a Clinical Professor of Medicine at Yale University Medical School and past president of the medical staff at Yale New Haven Hospital. He was a member of the New Haven County Medical Association and the Connecticut State Medical Society. Dr. Kaetz died 19 August 1999 at the age of 85.

McCRANN, DONALD J., Tufts University School of Medicine, 1934. Dr. McCrann practiced obstetrics and gynecology in Bloomfield and was attending physician at St. Francis Hospital. He also served as president of the hospital's medical staff and taught residents and medical students at the hospital's Obstetrics and Gynecology Clinic. He was a volunteer doctor at St. Agnes Home for Unwed Mothers. Dr. McCrann was a past president of the New England Obstetrics and Gynecology Society and section chairman of the American College of Obstetrics and Gynecology. He was a member of the Hartford County Medical Association and the Connecticut State Medical Society where he was a former vice president and served on the Committee on Maternal Morbidity and Mortality for over 10 years. Dr. McCrann died 7 August 1999 at the age of 90.

PANTALEO, CARL V., Creighton University School of Medicine, 1943. Dr. Pantaleo retired from the practice of radiology in 1987. He was the founder of Radiology Group PC. He was a member of the New Haven County Medical Association, the Connecticut State Medical Society, and the American Medical Association. Dr. Pantaleo died 23 July 1999 at the age of 82.

TIRELLA, FRED F., Tufts University School of Medicine, 1937. Dr. Tirella retired from the practice of internal medicine and cardiology in 1984. He was a member of the Hartford County Medical Association where he served as a delegate to the Connecticut State Medical Society in the 1960s, the Connecticut State Medical Society where he served on the Conference Committee with the Connecticut Pharmaceutical Association during the 1960s and the Committee on Mental Health during the 1970s, and the American Medical Association. Dr. Tirella died July 1999 at the age of 88.

VERNLUND, ROBERT J., University of Vermont College of Medicine, 1945. Dr. Vernlund practiced ophthalmology at Hartford Hospital and Newington Children's Hospital. He served as assistant clinical professor of ophthalmologic surgery at the University of Connecticut Medical School. In addition to regional and national ophthalmological societies, Dr. Vernlund was a member of the Hartford County Medical Association, the Connecticut State Medical Society, and the American Medical Association. Dr. Vernlund died 5 September 1999 at the age of 78.

YANNET, HERMAN, Yale University School of Medicine, 1929. Dr. Yannet, active in the field of mental retardation, served as the medical director of the Southbury Training School for more than 30 years. He was a professor emeritus at Yale University School of Medicine and for many years conducted a pediatric neurology clinic and acted as a consultant and lecturer. In the early 1960s he participated in a White House Conference on Children's Health. He was a member of the New Haven County Medical Association, the Connecticut State Medical Society where he served on the Technical Medical Advisory Committee to the Crippled Children Division for 16 years, and the American Medical Association. Dr. Yannet died 31 July 1999 at the age of 95.

ZEHRUNG, WILLIAM J., New York Medical College, 1950. Dr. Zehrung was on the staff of New Milford Hospital for 25 years. He served as chief of the anesthesiology department and later served as chief of staff of the hospital. From 1970 to 1989, he served as director of health for the town of New Milford. Dr. Zehrung was a member of the Fairfield County Medical Association, the Connecticut State Medical Society, and the American Medical Association. Dr. Zehrung died 24 August 1999 at the age of 80.

CSMS PHYSICIAN PLACEMENT SERVICE

The Society maintains the Physician Placement Service as a *free* service to the medical profession, hospitals, and communities in Connecticut.

***Opportunities* should be typed, double-spaced copy on letterhead and submitted to CSMS, Physician Placement Service, 160 St. Ronan Street, New Haven, CT 06511 (203) 865-0587 or fax to (203) 865-4997. These will be published as space permits and will be distributed to physicians inquiring about such *opportunities*.**

***Physicians wishing to locate* in Connecticut may call the office requesting opportunities in their specialty. Also, candidates are invited to submit a resume to be kept on file with the Society. An announcement of a physician's availability will be published in two issues of *Connecticut Medicine* as space permits.**

Listing of physicians in the Placement Service does not in any way represent certification by the Society. Investigation of credentials and experience is the responsibility of those seeking applicants for positions.

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Available July 1, 2000. Board eligible on July 1, 2000. Currently finishing residency at Hospital of St. Raphael's, New Haven. M.D. at New York Medical College, 1997. Seeking primary care position in an established group practicing in the Southern Connecticut region. Please respond to: Robert J. Larkin, 660 Mix Ave., Apt. 3A, Hamden, CT 06514, email robertj.larkin@worldnet.att.net.

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Available immediately. Licensed in Connecticut and New York. M.D. at Bologna University, Italy. Internship at Long Island College Hospital, Brooklyn, New York. Residency at Yale-New Haven Hospital, Veterans Hospital, West Haven. Fellowship in cytopathology. Also experienced in nutritional preventive medicine and holistic alternative methods. Seeking a position within commuting distance of Westport. Please reply to: Marie DiPasquale, M.D., 29 Old Hill Farms Rd., Westport, CT 06880; telephone 203-226-1719.

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Board-certified pediatrician, licensed in Connecticut with extensive experience, looking for part-time or full-time work in private office, clinic or walk-in center (pediatric, adults). Please respond to: G. Lee, M.D., 162 Yankee Peddler Path, Madison, CT 06443; telephone 203-245-1996.

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Norwalk Hospital Vicinity, New Canaan, Connecticut. First floor: Five rooms, half bath: $2,400 per month. Second floor: Four rooms, full bath: $1,400 per month. Parking. Call (203) 966-2633.

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Members of the Connecticut State Medical Society reading papers before other organiza-tions are invited to submit their papers to the *Journal* for consideration. Authors preparing manuscripts for submission to *Connecticut Medicine* should consult **Information for Authors**. This is published in most issues of *Connecticut Medicine* or may be obtained from the *Journal* office. Adherence to the instructions will prevent delays both in acceptance and in publication.

Papers prepared on a word processor should be submitted on a diskette along with the hard copy.

Please send them to:

H. David Crombie, M.D.
Connecticut Medicine
160 St. Ronan Street
New Haven, CT 06511

Connecticut Medicine

Journal of the Connecticut State Medical Society

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